

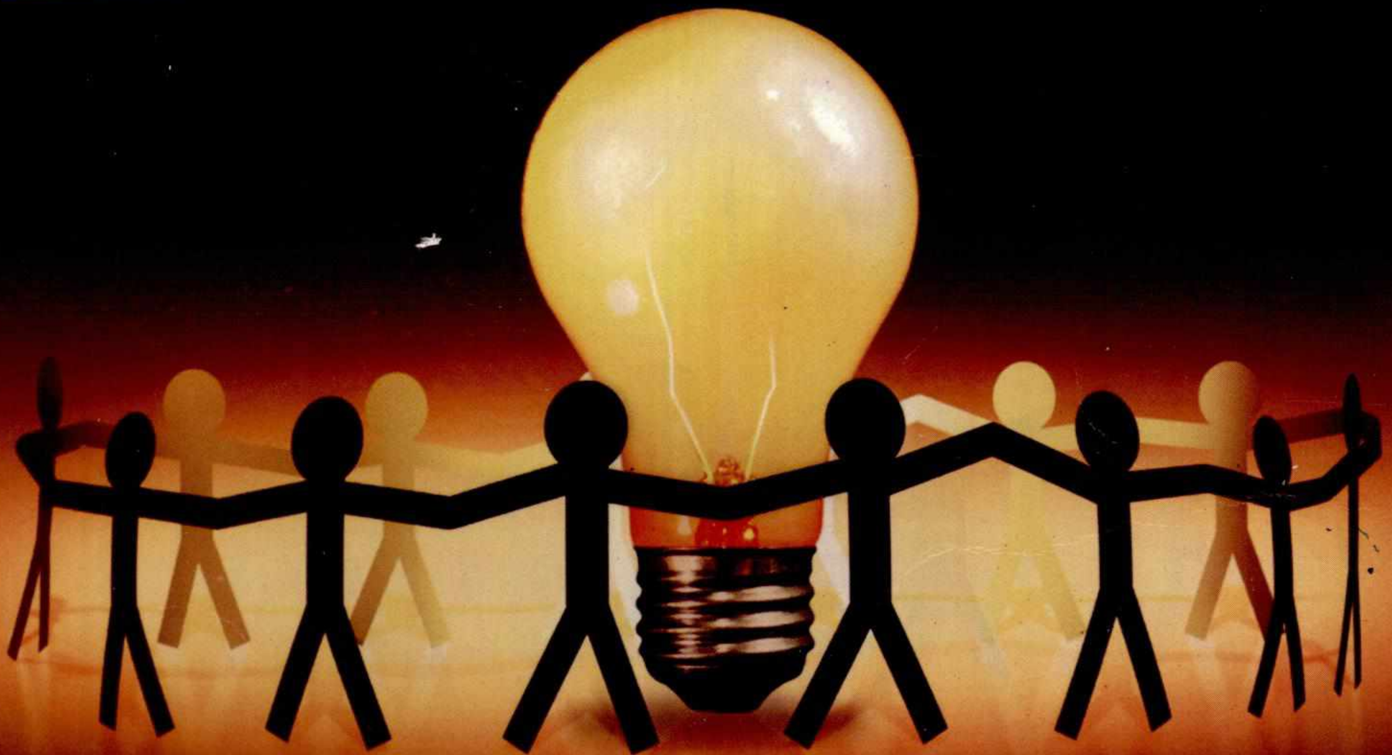
ALAGAPPA UNIVERSITY

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DIRECTORATE OF DISTANCE EDUCATION

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MBA (TECHNOLOGY MANAGEMENT)
PAPER - 4.2

KNOWLEDGE AND CHANGE MANAGEMENT

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Paper – 4.2

Self Learning Material



DIRECTORATE OF DISTANCE EDUCATION
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SYLLABUS

MBA (Technology Management)

4.2: KNOWLEDGE AND CHANGE MANAGEMENT

Unit 1: Conceptual Exploration of KM: Meaning, Nature, Types and Aspects of Knowledge Management (KM) - Data> Information>Knowledge>Wisdom continuum - Value of Knowledge Management - KM as Type of Activity- KM as a Set of Processes- Knowledge Management and supporting concepts: Knowledge Analysis (KA), Knowledge Planning (KP) Knowledge Technology (KT) Knowledge Management (KM)- Computer Supported Work Systems (CSWS)- Knowledge engineering and transfer.

Unit 2: Process of KM: KM as a Business Process- 3-tier conceptualization of KM: Knowledge Management>Knowledge Process> Business Process-KM as Management of Information- KM as Management of People or Knowledge Workers- KM as transforming Individual knowledge into Organizational knowledge – KM as Managing for New Knowledge- Knowledge Dimensions: Tacit knowledge, explicit knowledge and new knowledge- Knowledge Spiral model of Nonaka & Takeuchi.

Unit 3: Strategies for KM: KM strategies- push (active) and pull (ad hoc) strategies- Cross-project and Mapping strategies- Competence building and Collaborative strategies- Motivations for KM- KM technologies- KM System- KM reflecting in Decision Execution cycles (DECs)- KM reflecting in Complex Adaptive Systems (CAS) - KM reflecting in Learning Organization (LO)- KM reflecting in Distributed Organizational Knowledge Base (DOKB)- Knowledge Life Cycle and the Business Processing Environment.

Unit 4: Conceptual Exploration of CM: Meaning, Nature and Types Change Management **(CM)** - Areas of Change in Business – CM as 'unconscious incompetence' to into 'conscious competence- Change programs – Change levers – Change as growth – Change as transformation – Change as turnaround – value-based change-Mapping change- Change saturation- Change Resistance- John P Kotter's eight steps to successful change - Change is Life: Change or Be Changed- Change for Growing and Growing with Change.

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CONTENTS

UNIT 1 CONCEPTUAL EXPLORATION OF KNOWLEDGE MANAGEMENT

NOTES

Structure

1.0 INTRODUCTION

It has been extensively identified that knowledge is an important aspect for an economy to develop. We are seeing a lot of transformation rapidly happening in our society. Everyday we are seeing that we are becoming more and more dependent on knowledge. If this is the case with our societies, the scenario is not much different for organizations. Nowadays, if top management is asked to underline a single resource which is most critical for their organization to achieve and sustain competitive advantage, most of them will be selecting - "Knowledge". With such an importance to knowledge, managing it has become a serious concern for organizations. An organization which can build an excellent process to manage knowledge, certainly will have a competitive edge over its competitors.

Agreeing on the existing concentration by organizations and the character of extreme competition, a critical activity taken up by them is knowledge management.

Knowledge management (KM) cannot be achieved with a single definite activity. It involves an assortment of activities. These are usually referred to as

knowledge activities. The utilization of the knowledge activities at the resources connected to knowledge which is limited and assisted through an extensive choice of aspects will result in KM.

Research studies do indicate a number of knowledge activities which are important. Some of them are as below:

- Knowledge Acquisition
- Knowledge Utilization
- Knowledge Selection
- Knowledge Transfer
- Knowledge Creation
- Knowledge Internalization

Research studies indicate that knowledge transfer deserves the most careful attention among these activities so that the organizations can manage knowledge successfully.

1.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the meaning, nature and types of KM
- State the value of change management
- Discuss KM as types of activity and a set of process
- Define KM and supporting concepts
- Describe knowledge engineering and transfer.

1.2 MEANING, NATURE, TYPES AND ASPECTS OF KNOWLEDGE MANAGEMENT (KM)

The following sub-sections discuss the meaning, nature, types and key aspects of knowledge management:

1.2.1 Meaning and Nature of KM

Knowledge Management (KM) is a concept and a term that arose approximately two decades ago, roughly in 1990. Quite simply one might say that it means organizing an organization's information and knowledge holistically, but that sounds a bit woolly, and surprisingly enough, even though it sounds overboard, it is not the whole picture. Very early on in the KM movement, Davenport (1994) offered the still widely quoted definition:

"Knowledge management is the process of capturing, distributing, and effectively using knowledge."

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This definition has the virtue of being simple, stark, and to the point. A few years later, the Gartner Group created another definition of KM, which is perhaps the most frequently cited one (Duhon, 1998):

"Knowledge management is a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets. These assets may include databases, documents, policies, procedures, and previously un-captured expertise and experience in individual workers."

Both definitions share a very organizational, a very corporate orientation. KM, historically at least, is primarily about managing the knowledge of and in organizations.

Some Other Important Definitions of "Knowledge Management"

- **University of Texas:** The systematic process of finding, selecting, organizing, distilling and presenting information in a way that improves an employee's comprehension in a specific area of interest. Knowledge management helps an organization to gain insight and understanding from its own experience. Specific knowledge management activities help focus the organization on acquiring, storing and utilizing knowledge for such things as problem solving, dynamic learning, strategic planning and decision making. It also protects intellectual assets from decay, adds to a firm's intelligence and provides increased flexibility.
- **Computerworld (Maglitta, 1996):** Knowledge management in general tries to organize and make available important know-how, wherever and whenever it's needed. This includes processes, procedures, patents, reference works, formulas, "best practices," forecasts and fixes. Technologically, intranets, groupware, data warehouses, networks, bulletin boards, videoconferencing are key tools for storing and distributing this intelligence.
- **Forbes: (Bair, 1997):** Partly as a reaction to downsizing, some organizations are now trying to use technology to capture the knowledge residing in the minds of their employees so it can be easily shared across the enterprise. Knowledge management aims to capture the knowledge that employees really need in a central repository and filter out the surplus.
- **R. Gregory Wenig (1998)** defines KM from an organizational perspective. According to his definition, Knowledge Management for the organization consists of activities focused on the organization gaining knowledge from its own experience and from the experience of others, and on the judicious application of that knowledge to fulfill the mission of the organization.

The operational origin of KM, as the term is understood today, arose within the consulting community and from there the principles of KM were rather rapidly spread by the consulting organizations to other disciplines. The consulting firms quickly

realized the potential of the Intranet flavor of the Internet for linking together their own geographically dispersed and knowledge-based organizations. Once having gained expertise in how to take advantage of intranets to connect across their organizations and to share and manage information and knowledge, they then understood that the expertise they had gained was a product that could be sold to other organizations. A new product of course needed a name, and the name chosen, or at least arrived at, was Knowledge Management. The timing was propitious, as the enthusiasm for intellectual capital in the 1980s, had primed the pump for the recognition of information and knowledge as essential assets for any organization.

Perhaps the most central thrust in KM is to capture and make available, so it can be used by others in the organization, the information and knowledge that is in people's heads as it were, and that has never been explicitly set down.

Another way to view and define KM is to describe KM as the movement to replicate the information environment known to be conducive to successful R&D—rich, deep, and open communication and information access—and deploy it broadly across the firm. It is almost trite now to observe that we are in the post-industrial information age and that an increasingly large proportion of the working population consists of information workers. The role of the researcher, considered the quintessential information worker, has been studied in depth with a focus on identifying environmental aspects that lead to successful research (Koenig, 1990, 1992), and the strongest relationship by far is with information and knowledge access and communication. It is quite logical then to attempt to apply those same successful environmental aspects to knowledge workers at large, and that is what in fact KM attempts to do.

The most obvious point is the making of the organization's data and information available to the members of the organization through portals and with the use of content management systems. Content Management, sometimes known as Enterprise Content Management, is the most immediate and obvious part of KM. For a wonderful graphic snapshot of the content management domain go to realstorygroup.com and look at their 2012 Content Technology Vendor Map.

In addition to the obvious, however, there are three undertakings that are quintessentially KM, and those are the bases for most of what is described as KM.

Lessons Learned Databases

Lessons learned databases are databases that attempt to capture and to make accessible knowledge that has been operationally obtained and typically would not have been captured in a fixed medium (to use copyright terminology). In the KM context, the emphasis is typically upon capturing knowledge embedded in persons and making it explicit. The lessons learned concept or practice is one that might be described as having been birthed by KM, as there is very little in the way of a direct antecedent. Early in the KM movement, the phrase typically used was "best practices," but that phrase was soon replaced with "lessons learned." The reasons were that

"lessons learned" was a broader and more inclusive term and because "best practice" seemed too restrictive and could be interpreted as meaning there was only one best practice in a situation. What might be a best practice in North American culture might well not be a best practice in another culture. The major international consulting firms were very aware of this and led the movement to substitute the new term. "Best Practices" succeeded by "Lessons Learned" became the most common hallmark phrase of early KM development.

Nothing of course is totally new and without something that can be viewed as a predecessor. One such possible antecedent was the World War II debriefing of pilots after a mission. The primary purpose was to gather military intelligence, but a clear secondary purpose was to identify lessons learned, though they were not so named, to pass on to other pilots and instructors. Similarly, the U. S. Navy Submarine Service, after an embarrassingly lengthy fiasco of torpedoes that failed to detonate properly and an even more embarrassing failure to follow up on sub captains' consistent torpedo failure reports, instituted a system of widely disseminated "Captain's Patrol Reports" with the intent of avoiding any such fiasco in the future. The Captain's Patrol Reports were very clearly designed to encourage analytical reporting, with reasoned analyses of the reasons for failure and success. It was emphasized that a key purpose of the report was to make recommendations about strategy for senior officers to mull over and about tactics for other skippers to take advantage of (McInerney and Koenig, 2011).

The military has become an avid proponent of the lessons learned concept. The phrase the military uses is "After Action Reports." The concept is very simple: don't rely on someone to make a report. There will almost always be too many things immediately demanding that person's attention after an action. There should be a system whereby someone, typically someone in KM, is assigned the responsibility to debrief, separate the wheat from the chaff, create the report, and then ensure that the lessons learned are captured and disseminated.

The concept is by no means limited to the military. Larry Prusak (2004) opines that in the corporate world the number one KM implementation failure is that so often the project team is disbanded and the team members reassigned before there is any debriefing or after-action report assembled. Organizations operating in a project team milieu need to pay very close attention to this issue and to set up an after- action procedure with clearly delineated responsibility for its implementation.

A wonderfully instructive example of a "lesson learned" is recounted by KM consultant Mark Mazzie (2003). The story derives from his experience in the KM department at Wyeth Pharmaceuticals. Wyeth had recently introduced a new pharmaceutical agent primarily for pediatric use. They expected it to be a substantial success because, unlike its predecessors, it needed to be administered only once a day, which would make it much easier for the caregiver to ensure that the child followed the drug regimen. Sales of the drug started well, but soon turned disappointing. One sales rep (what the pharmaceutical industry used to call detail men), however,

discovered, by chatting with her customers, the reason for the disappointing sales and discovered the solution. The problem was that kids objected strenuously to the taste of the drug, and caregivers were reporting to prescribing physicians that they couldn't get their kid to continue taking the drug. The solution was orange juice. A swig of orange juice quite effectively masked the offensive taste. If the sales representative illuminated the physician that the therapy should be conveyed to the caregiver as the pill and a glass of orange juice taken simultaneously first thing in the morning, then there was no dissatisfaction and sales were fine.

The implementation of a lessons learned system is complex both politically and operationally. Many of the questions surrounding such a system are difficult to answer. Who is to decide what constitutes a worthwhile lesson learned? Are employees free to submit to the system un-vetted? Most successful lessons learned implementations have concluded that such a system needs to be monitored and that there needs to be a vetting and approval mechanism before items are mounted as lessons learned. How long do items stay in the system? Who decides when an item is no longer salient and timely? Most successful lessons learned systems have an active weeding or stratification process. Without a clearly designed process for weeding, the proportion of new and crisp items inevitably declines, the system begins to look stale and usage and utility falls. Deletion, of course, is not necessarily loss and destruction. Using stratification principles, items removed from the foreground can be archived and moved to the background but still made available.

All these questions need to be carefully thought out and resolved, and the mechanisms designed and put in place before a lessons-learned system is launched. Inattention can easily lead to failure and the tarring of subsequent efforts.

Expertise Location

If knowledge resides in people, then one of the best ways to learn what an expert knows is to talk with that expert. Locating the right expert with the knowledge you need, though, can be a problem. The basic function of an expertise locator system is straightforward: it is to identify and locate those persons within an organization who have expertise in a particular area. Such systems were commonly known as "Yellow Page" systems in the early days of KM. In recent years, the term expertise locator or expertise location has replaced yellow pages as being rather more precise.

There are now three areas which typically supply data for an expertise locator system, employee resumes, employee self identification of areas of expertise, typically by being requested to fill out a form online, or by algorithmic analysis of electronic communications from and to the employee. The latter approach is typically based on email traffic but can include other social networking electronic communications such as Twitter and Facebook. Commercial packages to match queries with expertise are available. Most of them have load-balancing schemes so as not to overload any particular expert. Typically such systems rank the degree of presumed expertise and will shift a query down the expertise ranking when the higher choices appear to be

becoming overloaded. Such systems also often have a feature by which the requester can flag the request as a priority, and the system will then try to match higher priority requests with higher presumed (calculated) expertise rank.

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Communities of Practice (CoPs)

CoPs are groups of individuals with shared interests that come together in person or virtually to tell stories, to share and discuss problems and opportunities, discuss best practices, and talk over lessons learned (Wenger, 1998; Wenger & Snyder, 1999). Communities of practice emphasize the social nature of learning within or across organizations. Conversations around the water cooler are often taken for granted, but in geographically distributed organizations the water cooler needs to become virtual. Similarly, organizations find that when workers give up a company office to work online from home or on the road, the natural knowledge sharing that occurs in social spaces must be replicated virtually. In the context of KM, CoPs are generally understood to mean electronically linked communities. Electronic linkage is not essential, of course, but since KM arose in the consulting community from the awareness of the potential of Intranets to link geographically dispersed organizations, this orientation is understandable and inevitable.

The classic example of the deployment of CoPs is that of the World Bank. When James Wolfensohn became president in 1995, he focused on the World Bank's role in disseminating knowledge about development. To that end he encouraged the development of CoPs. A CoP might, for example, focus on road construction and maintenance in arid conditions, and the point would be to include not only participants from the World Bank and the country where the relevant project was being implemented, but also participants from elsewhere who had expertise in building roads in arid conditions, such as staff from the Australian Road Research Board and the Arizona Department of Transportation.

The organization and maintenance of CoPs is not a simple or easy undertaking. As Durham (2004) points out, there are several key roles to be filled, which she describes as manager, moderator, and thought leader. They need not necessarily be three separate people, but in some cases they will need to be. For a CoP some questions that need to be thought about are:

- Who fills the various roles of: manager, moderator, and thought leader?
- How is the CoP managed?
- Are postings open or does someone vet or edit the postings?
- How is the CoP kept fresh and vital?
- When and how (under what rules) are items removed?
- How are those items archived?
- Who reviews the CoP for activity?
- Who looks for new members or suggests that the CoP may have outlived its usefulness?

1.2.2 Types of Knowledge

Knowledge in organisations is often classified into the following categories:

1. **Explicit:** Explicit knowledge is knowledge that can be captured and written down in documents or databases. Examples of explicit knowledge include instruction manuals, written procedures, best practices, lessons learned and research findings. Explicit knowledge can be categorised as either structured or unstructured. Documents, databases, and spreadsheets are examples of structured knowledge, because the data or information in them is organised in a particular way for future retrieval. In contrast, e-mails, images, training courses, and audio and video selections are examples of unstructured knowledge because the information they contain is not referenced for retrieval.
2. **Implicit:** Information or knowledge that is not set out in tangible form but could be made explicit.
3. **Tacit:** Tacit knowledge is the knowledge that people carry in their heads. It is much less concrete than explicit knowledge. It is more of an "unspoken understanding" about something, knowledge that is more difficult to write down in a document or a database. An example might be, knowing how to ride a bicycle – you know how to do it, you can do it again and again, but could you write down instructions for someone to learn to ride a bicycle? Tacit knowledge can be difficult to access, as it is often not known to others. In fact, most people are not aware of the knowledge they themselves possess or of its value to others. Tacit knowledge is considered more valuable because it provides context for people, places, ideas and experiences. It generally requires extensive personal contact and trust to share effectively.

The classic example in the KM literature of true "tacit" knowledge is Nonaka and Takeuchi's example of the kinesthetic knowledge that was necessary to design and engineer a home bread maker, knowledge that could only be gained or transferred by having engineers work alongside bread makers and learn the motions and the "feel" necessary to knead bread dough (Nonaka & Takeuchi, 1995).

1.2.3 Key Aspects of KM

There are two main aspects of knowledge management, namely, information management and people management. Viewed from this perspective, knowledge management is about information, on one hand, and people, on the other.

Knowledge management is essentially about facilitating the processes by which knowledge is created, shared and used in organisations. It is not about setting up a new department or getting in a new computer system. It is about making small changes to the way everyone in the organisation works. There are many ways of looking at knowledge management and different organisations will take different approaches. Generally speaking, creating a knowledge environment usually requires

changing organisational values and culture, changing people's behaviours and work patterns, and providing people with easy access to each other and to relevant information resources. In terms of how that is done, the processes of knowledge management are many and varied. As knowledge management is a relatively new concept, organisations are still finding their way and so there is no single agreed way forward or best practice. This is a time of much trial and error. Similarly, to simply copy the practices of another organisation would probably not work because each organisation faces a different set of knowledge management problems and challenges. Knowledge management is essentially about people – how they create, share and use knowledge, and so no knowledge management tool will work if it is not applied in a manner that is sensitive to the ways people think and behave. That being said, there are of course a whole raft of options in terms of tools and techniques, many of which are not new. Many of the processes that currently fall under the banner of knowledge management have been around for a long time, but as part of functions such as training, human resources, internal communications, information technology, librarianship, records management and marketing to name a few. And some of those processes can be very simple, such as:

- Providing induction packs full of "know how" to new staff
- Conducting exit interviews when staff leave so that their knowledge is not lost to the organisation
- Creating databases of all publications produced by an organisation so that staff can access them from their desk
- Providing ongoing learning so that people can constantly update their knowledge
- Encouraging people with a common interest to network with each other
- Creating electronic filing systems that can be searched in a number of ways, making the information much easier to find
- Redesigning offices to be open plan so that staff and managers are more visible and talk to each other more
- Putting staff directories online so that people can easily find out who does what and where they are
- Creating intranets so that staff can access all kinds of organisational information and knowledge that might otherwise take a great deal of time and energy to find

Important Facts of KM

KM is not useless

The entire idea sits on the fact that it's a long-term strategy to maintain the existing knowledge of the person/organization and also to harvest the "new" knowledge, which a person acquires during his process of learning. Debating what knowledge management "is not" is pointless. People intuitively know whether they are managing

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their own knowledge well and whether their organization helps them to work without stress and inefficiency.

People and technology

People should not have to choose between knowing a little about lot or about a little. They should be able to concentrate most on what they need to know most and, when needed, find out a lot about related things. This requires a browseable knowledge environment designed the way people think. People want to solve problems, think, and collaborate. They do not want to "use technology". Technology is a means, not an end. Technology must serve people, not the other way around. Technology creates knowledge management problems faster than it creates knowledge management solutions. If knowledge management were intuitive, organization would have perfected it by now.

Financial factor

The cost of not managing knowledge greatly exceeds the cost of managing important knowledge. Organizations have the habit of externalizing the cost of not managing the knowledge to their customers.

Future trends

Those who want to think and act in integrated, creative ways and solve complex problems need rich, integrated, up-to-date knowledge management environments to support them. The gulf between traditional and knowledge-driven organizations is growing as knowledge-driven organizations concentrate not only on present success but their own evolution so they can better take advantage of the new knowledge-intense environment.

The paradoxical image

Call it the knowledge management paradox: those who are so busy "putting out fires" that they have no time to tackle knowledge management are those who most need to manage their knowledge better. While many CEOs put KM as the top priority, few companies are still at a stage of implementation: It's the mind shift of the organizational heads to add knowledge to the balance sheet. What we know now is that, those companies that crack strategic knowledge management will be those most likely to succeed in the new economy. The new economy is always termed as the knowledge economy. Hence a company with higher knowledge quotient makes it big.

Elements of KM

The following are the key elements of KM:

- **People:** Getting an organisation's culture (including values and behaviours) "right" for knowledge management is typically the most important and yet often

the most difficult challenge. Knowledge management is first and foremost a people issue. Does the culture of your organisation support ongoing learning and knowledge sharing? Are people motivated and rewarded for creating, sharing and using knowledge? Is there a culture of openness and mutual respect and support? Or is your organisation very hierarchical where "knowledge is power" and so people are reluctant to share? Are people under constant pressure to act, with no time for knowledge-seeking or reflection? Do they feel inspired to innovate and learn from mistakes, or is there a strong "blame and shame" culture?

- **Processes:** In order to improve knowledge sharing, organisations often need to make changes to the way their internal processes are structured, and sometimes even the organisational structure itself. For example, if an organisation is structured in such a way that different parts of it are competing for resources, then this will most likely be a barrier to knowledge sharing. Looking at the many aspects of "how things are done around here" in your organisation, which processes constitute either barriers to, or enablers of, knowledge management? How can these processes be adapted, or what new processes can be introduced, to support people in creating, sharing and using knowledge?
- **Technology:** A common misconception is that knowledge management is mainly about technology – getting an intranet, linking people by e-mail, compiling information databases etc. Technology is often a crucial enabler of knowledge management – it can help connect people with information, and people with each other, but it is not the solution. And it is vital that any technology used "fits" the organisation's people and processes – otherwise it will simply not be used. These three components are often compared to the legs of a three-legged stool – if one is missing, then the stool will collapse. However, one leg is viewed as being more important than the others – people. An organisation's primary focus should be on developing a knowledge-friendly culture and knowledge-friendly behaviours among its people, which should be supported by the appropriate processes, and which may be enabled through technology

Case study: Holistic KM at the Department of Health

This is a good example of how a KM strategy embraces several interrelated dimensions including people, processes, technology, content and also top-down, bottom-up and middle-out approaches.

Description

In 2001 the UK's Department of Health (DoH) had 5,000 staff in over 50 office locations as well as home workers. It installed its first intranet in 1996, which was followed in 1998 by an electronic record management system (MEDS) and

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later by the UK's first implementation of the ministerial briefing system, the Knowledge Network. These developments provided a solid base on which to embark on its own KM initiative.

A major departmental review in 2001 underlined the need for better knowledge management. It highlighted the fact that knowledge underpinned the work of the department, but that there were issues of accessibility, quality, relevance and usability. Consultants were appointed and a KM strategy developed.

Overall approach

Consultants Fujitsu/ICL applied a four-part KM consultancy framework used with other clients:

- Understand KM drivers and how they related to organisational strategy
- Develop of a knowledge strategy
- Design and plan a KM implementation programme
- Map the benefits and measure the results.

Development of the strategy started with the creation of a clear vision that articulates the role of information and knowledge. There was also an assessment of the strengths and weaknesses of processes, practices and ICT. Also identified were the skills, roles, processes and technologies needed to implement the vision. Finally the gap between capabilities and vision provided a basis for planning the implementation programme.

The approach adopted was evolutionary, building on existing department initiatives and using tools already in use and applying "practical, manageable changes".

Main activities

Karen Lewis, a section head, identified three crucial aspects of changing the DOH from what it was to the desired 'KM-enabled' organisation:

1. Recognise that KM is not just delivering more IT.
2. Convey the notion that KM is not a passing fad, but a way of improving effectiveness.
3. KM is not "done to people" but actively engages them in the process.

Activities in the KM programme followed four main strands:

- **Leadership and accountability:** Gaining senior management support, identifying roles, responsibilities from both top-down and bottom-up; aligning KM activity to directly support departmental initiatives.
- **People and change management:** Motivating employees (a key focus), establishing appropriate knowledge sharing behaviours; for example KM principles were incorporated into a new e-induction package.

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- **Content and processes:** Reviewing how knowledge is managed over its life cycle; application of knowledge harvesting techniques. A key element of this was developing a lessons learned knowledge base.
- **Information infrastructure:** Improving support and tools that give people access to information, need specific attention to interfaces with external partners.
- The approach adopted was evolutionary, building on existing department initiatives and using tools already in use. The aim of continuous improvement is addressed through a set of "practical, manageable changes".

Results

- A realistic KM strategy that was applied in an evolutinary fashion and built upon on existing foundations.
- Front-line staff have easier access to knowledge and are able to deal with queries more directly, rather than diverting the time of busy specialists or policy advisors.
- The department's knowledge base is continually enriched by users' feedback and updating.
- A flexible and customisable approach that gives attention to what works and what doesn't in different work groups and contexts.

Lessons

- Obtain senior-management support at an early stage. Overt endorsement helps.
- Avoid over-use of KM jargon - staff need to know about the benefits to them, not KM theory.
- Identify and work with complementary pre-existing initiatives.
- Find and work with a broad base of stakeholders (actual or potential).
- Take a phased approach - look for 'quick wins' but as part of a longer-term plan.
- Don't see (or promote) IT as the solution, but as a tool.

Source: *http://www.skyrme.com/kmcases/doh.htm*

1.3 DATA>INFORMATION>KNOWLEDGE>WISDOM CONTINUUM

The 'Data Information Knowledge Wisdom Hierarchy' is an epistemological system usually associated with Russell Ackoff (Ackoff, 1989) although elements of it are

prefigured in the work of Milan Zeleny (1987) and in more poetic form in T.S. Eliot (above) and in the lyrics of a song by Frank Zappa.

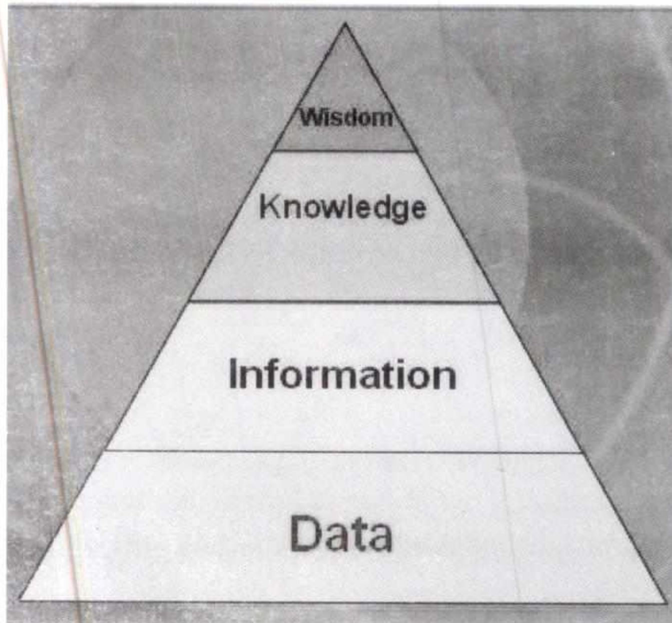


Fig. 1.1: Knowledge Pyramid

- **Data:** The term data usually defines raw data, something unrefined that has no significance, yet. A spreadsheet, for example, contains many values that are, by themselves, basically random numbers. The numbers per se do not tell what they stand for or what they are associated with. They are data.
- **Information:** Information, in turn, is made up of data. It is data with relevance and a determined purpose. In the example above, one would realize that the numbers in the spreadsheet stand for the average temperature (given in degrees centigrade) of every day of a certain year.
- **Knowledge:** Knowledge, on the other hand, is based on information. The generation of knowledge from information requires the process of learning. When the learner associates the new information with the already stored data and gives the information a meaning, new knowledge is produced. In the example given above, the temperature information could be related to other information about climate and weather.

The application of knowledge and understanding can generate new information. In a process of learning and understanding, the fact that summer is the hottest time of the year can ultimately be derived from the temperature-information. Thus, new information and new knowledge is generated.

- **Wisdom:** Wisdom is on yet a higher level than knowledge. It is a collection of a myriad of knowledge-items that are aggregated with experience and age. The concept of wisdom requires reflecting upon knowledge and experiences.

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Data is understood primarily as a physical resource, and the metaphorical form of this resource has a number of properties which distinguish it from information and knowledge. Firstly it is conceptualised as a large number of individuals, separate, atomistic, entities, like an aggregate of small stones, or a pile of leaves blown by the wind. Items of data have an ontological irreducibility which prevents their being understood as composites themselves; just as when one is collecting pebbles from the beach one would not think to increase one's collection by splitting each pebble in half, so individual datum cannot be divided. Data is also understood as pre-existing any efforts to effect its collection; we conceive it as simply 'out there' waiting for some kind of exploratory practice to discover it. Such entities might be 'collected', 'mined', 'gathered', or 'stored'; on the other hand, because items of data are unconnected to every other item, they might also easily be lost, fall away from one another, disaggregate, or slip through the cracks.

Example

This example uses a bank savings account to show how data, information, knowledge, and wisdom relate to principal, interest rate, and interest.

Data: The numbers 100 or 5%, completely out of context, are just pieces of data. Interest, principal, and interest rate, out of context, are not much more than data as each has multiple meanings which are context dependent.

Information: If I establish a bank savings account as the basis for context, then interest, principal, and interest rate become meaningful in that context with specific interpretations.

- Principal is the amount of money, $100, in the savings account.
- Interest rate, 5%, is the factor used by the bank to compute interest on the principal.

Knowledge: If I put $100 in my savings account, and the bank pays 5% interest yearly, then at the end of one year the bank will compute the interest of $5 and add it to my principal and I will have $105 in the bank. This pattern represents knowledge, which, when I understand it, allows me to understand how the pattern will evolve over time and the results it will produce. In understanding the pattern, I know, and what I know is knowledge. If I deposit more money in my account, I will earn more interest, while if I withdraw money from my account, I will earn less interest.

Wisdom: Getting wisdom out of this is a bit tricky, and is, in fact, founded in systems principles. The principle is that any action which produces a result which encourages more of the same action produces an emergent characteristic called growth. And, nothing grows forever for sooner or later growth runs into limits.

The Continuum of Understanding DIKW Hierarchy

One gains knowledge through context (experiences) and understanding. When one has context, one can weave the various relationships of experiences. The greater the context, the greater the variety of experiences one is able to draw from.

The greater one understands the subject matter, the more one is able to weave past experiences (context) into new knowledge by absorbing, doing, interacting, and reflecting.

Thus, understanding is a continuum (Cleveland, 1982)

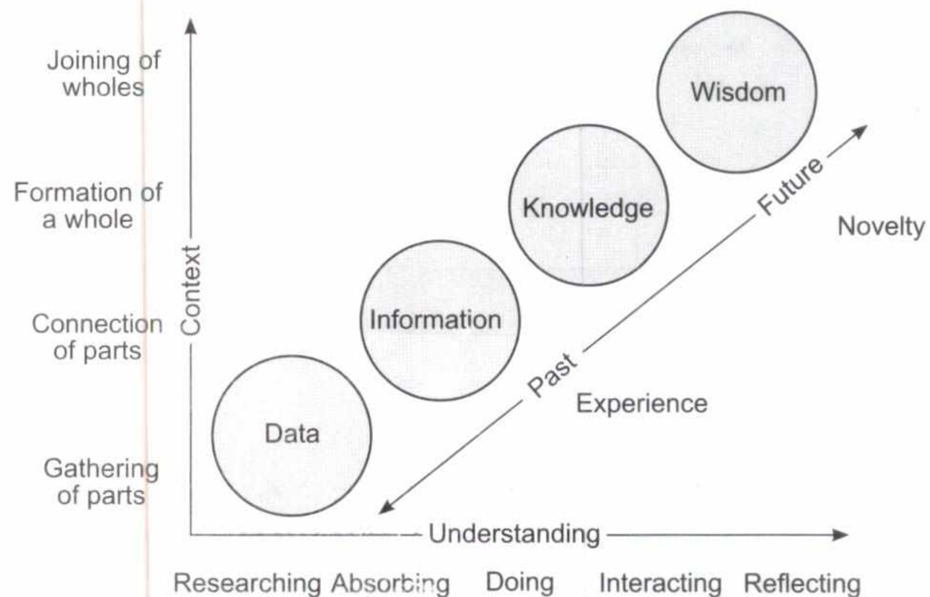


Fig. 1.2: DIKW Continuum

- Data comes about through research, creation, gathering, and discovery.
- Information has context. Data is turned into information by organizing it so one can easily draw conclusions. Data is also turned into information by "presenting" it, such as expressing it through visual or auditory means.
- Knowledge has the complexity of experience, which comes about by seeing it from different perspectives. Information is static, but knowledge is dynamic as it lives within us.
- Wisdom is the ultimate level of understanding. As with knowledge, wisdom operates within us. We can share our experiences that create the building blocks for wisdom, however, it needs to be communicated with even more understanding of the personal contexts of the audience than with knowledge sharing

Often, the distinctions between data, information, knowledge, and wisdom are not very discrete, thus the distinctions between each term may seem more like shade of gray, rather than black and white (Shedroff, 2001). Data and information deal with the past. They are based on the gathering of facts and adding context. Knowledge deals with the present. It lives within us and enables us to perform. However, when we gain wisdom, we start dealing with the future. We are then able to envision and design for what will be rather than for what is or was.

Check Your Progress

1. Define knowledge management.
2. What is explicit knowledge?
3. State the meaning of tacit knowledge.

1.4 VALUE OF KNOWLEDGE MANAGEMENT

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The value of Knowledge Management relates directly to the effectiveness with which the managed knowledge enables the members of the organization to deal with today's situations and effectively envision and create their future. Without on-demand access to managed knowledge, every situation is addressed based on what the individual or group brings to the situation with them. With on-demand access to managed knowledge, every situation is addressed with the sum total of everything anyone in the organization has ever learned about a situation of a similar nature.

Knowledge management is based on the idea that an organisation's most valuable resource is the knowledge of its people. This is not a new idea – organisations have been managing "human resources" for years. What is new is the focus on knowledge. This focus is being driven by the accelerated rate of change in today's organisations and in society as a whole. Knowledge management recognises that today nearly all jobs involve "knowledge work" and so all staff are "knowledge workers" to some degree or another – meaning that their job depends more on their knowledge than their manual skills. This means that creating, sharing and using knowledge are among the most important activities of nearly every person in every organisation.

According to many experts, to get the most value from a company's intellectual assets, knowledge must be shared and served as the foundation for collaboration. Consequently, an effective KM program should help a company leverage the assets and provide the following benefits:

- Fostering innovation by encouraging free flow of ideas.
- Improving customer service by streamlining response time.
- Boosting revenues by getting products and services to market faster.
- Enhancing employee retention rates by recognizing the value of employees' knowledge and rewarding them for it.
- Streamlining operations and reducing costs by eliminating redundant or unnecessary processes.
- A creative approach to KM can result in improved efficiency, higher productivity and increased revenues in practically any business function.

Knowledge Management's (KM) role is to connect knowledge owners with knowledge seekers. The knowledge of one is transferred to the mind of the other, so that a new decision can be made or situation can be handled. KM provides a means to capture and store passing knowledge and broker it to the appropriate individuals.

Examples

Social (Governmental)

1. Coping with natural disasters

2. Safety in aviation/railways
3. Research and education

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Business

1. **Research and Development:** Faster solutions and reduction of redundant research
2. **Design and Development:** By allowing easier access to past design documents, best practices and better designs become available, faster, making faster deliveries gaining a competitive edge for the organization
3. **Operations:** Problems reported from the field greatly aid in improving manufacturing practices and add to product quality
4. **Cultural Change:** From striving to create and own ideas and objects- to sharing improving and reusing, in addition to creating new ideas and objects.

With the explosive growth of interest in knowledge management, many different 'knowledge management frameworks' have been produced. These frameworks build on the reputation of the organizations that have created them, and the depths of experience they offer. There is considerable benefit to be derived from these frameworks, and this applies to both the knowledge management (KM) community, and to businesses looking to make use of KM.

1. **Offers legitimacy:** While the benefits of applying knowledge management principles are well-defined, KM suffers from a lack of business recognition. Much of this stems from KM's relatively recent creation, and its difficulty in clearly distinguishing itself from other management disciplines. The organisations that have produced the leading frameworks typically have a strong reputation within the industry. Having a knowledge management framework associated with their name provides considerable prestige and recognition. The value of this should not be underestimated. In many cases, using a framework will provide a starting point for meaningful discussions with management
2. **Provides consistent language:** A framework defines a consistent set of knowledge management terms and concepts. This helps to bring together all the stakeholders in a KM project, including:
   - business management
   - end users
   - implementers
   - vendors
   - external consultants

In this way, any confusion is reduced, and effort can be focused on the project itself, not on discussions about the nature of knowledge management.

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3. **Outlines a process:** All major knowledge management frameworks offer a high-level process to follow for KM projects. This provides a direction to knowledge activities, and forms the basis for specific project management planning. In this way, the overall intent of the project is formalised, thereby simplifying the decision-making process.
4. **Provides a checklist:** The frameworks provide a checklist for a practical KM project. By working through the document, a project manager can be confident that all key aspects have been addressed. This improves the consistency, quality and repeatability of KM projects, and helps to guarantee that business goals are met.
5. **Offers a source of ideas:** While not intended to outline the 'state-of-the-art', the frameworks nonetheless list a number of practical processes and approaches which can be used in real-world KM projects. Every KM project has something to learn from these frameworks.
6. **Addresses non-technical aspects:** Successful KM projects focus upon a number of key areas:
   - analysis and planning
   - knowledge sharing and acquisition
   - culture
   - processes

While this is well recognised within the KM community, it is less often followed in IT departments. The frameworks provide a justification for including all these aspects in a project, thereby enhancing the final outcome.

7. **Framework for building frameworks:** Large organisations don't just need a KM project, they need a framework of their own. This framework builds an approach to knowledge management that is specifically tailored to the organisation's environment, processes and goals. Once such a framework has been developed, individual business units can then initiate KM projects, confident that they will integrate into a consistent global approach. This is particularly relevant to multinational organisations, or other geographically-dispersed businesses. With the difficulties of arranging face-to-face meetings, a documented strategy can resolve confusion, and facilitate communication.

The KM frameworks, with their very general approach to KM, provide an excellent starting point for developing a business-specific approach.

Benefits That Organizations Expect From KM

Some benefits of KM correlate directly to bottom-line savings, while others are more difficult to quantify. In today's information-driven economy, companies uncover most opportunities — and ultimately derive the most value — from intellectual rather than physical assets. To get the most value from a company's intellectual

assets, KM practitioners maintain that knowledge must be shared and serve as the foundation for collaboration. Yet better collaboration is not an end in itself; without an overarching business context, KM is meaningless at best and harmful at worst. Consequently, an effective KM program should help a company do one or more of the following:

- Foster innovation by encouraging the free flow of ideas
- Improve customer service by streamlining response time
- Boost revenues by getting products and services to market faster
- Enhance employee retention rates by recognizing the value of employees' knowledge and rewarding them for it
- Streamline operations and reduce costs by eliminating redundant or unnecessary processes

These are the most prevalent examples. A creative approach to KM can result in improved efficiency, higher productivity and increased revenues in practically any business function.

Gain and support for individual

KM effort and get people to use the systems and processes an organization is putting in place to facilitate KM:

- One tried-and-true way to build support for KM is to pilot the project among employees who have the most to gain and would be the most open to sharing their knowledge. This will vary depending on the organization.
- To get people to participate in the KM effort, you have to include knowledge collection and dissemination into employees' everyday jobs. In other words, you have to make it as easy for them to participate as much as possible. A lot of early KM efforts failed because they added cumbersome steps to the jobs of already overworked employees. So when things got busy, workers just didn't bother with the extra steps.
- Linking KM directly to job performance, creating a safe climate for people to share ideas and recognizing people who contribute to the KM effort (especially those people whose contributions impact the bottom line) are also critical tactics for getting people to make KM a part of their day-to-day life.
- Finally, many companies create incentive programs to motivate employees to share their knowledge. Ideally, participation in KM should be its own reward. If KM doesn't make life easier for employees, it will fail.

1.5 KNOWLEDGE MANAGEMENT AS TYPE OF ACTIVITY

According to R. Gregory Wenig, Knowledge Management (for the organization) consists of activities focused on the organization gaining knowledge from its own

experience and from the experience of others, and on the judicious application of that knowledge to fulfill the mission of the organization. These activities are executed by marrying technology, organizational structures, and cognitive based strategies to raise the yield of existing knowledge and produce new knowledge. Critical in this endeavor is the enhancement of the cognitive system (organization, human, computer, or joint human-computer system) in acquiring, storing and utilizing knowledge for learning, problem-solving, and decision-making.

Another author Rebecca O. Barclay and Philip C. Murray defined that "knowledge management is a business activity with two primary aspects: (a) treating the knowledge component of business activities as an explicit concern of business reflected in strategy, policy, and practice at all levels of the organization; and (b) making a direct connection between an organization's intellectual assets – both explicit (recorded) and tacit (personal know-how) – and positive business results".

KM was viewed as an activity that encompassed deploying the right IT tool in the enterprise and, often, using it to "manage knowledge" as characterized above. In that spirit, Data Warehousing, Data Mining, Business Intelligence (BI) and Online Analytical Processing (OLAP), Business Performance Measurement (BPM), CRM, Enterprise Resource Planning (ERP), Collaboration Management, Groupware, Search and Retrieval applications, Content Management (CM), Semantic Network/Text Mining applications, Document Management, Image Management, e-Conference applications, e-Learning applications, Expertise Locators (Yellow Pages), Best Practices Database applications, and Enterprise Information Portals (EIPs), have all been characterized as KM tools, and projects involving the deployment and use of one or another of these tools have been characterized and reported as KM projects. EIPs, in fact, were characterized as KM's "killer app," and scores of "KM cases" involving EIP projects were described and analyzed in the KM and portal literature (Firestone, 2003a).

1.6 KNOWLEDGE MANAGEMENT AS A SET OF PROCESSES

Knowledge Management is the set of processes that seeks to change the organization's present pattern of knowledge processing to enhance both it and its outcomes. A discrete Knowledge Management activity is one that has the same goal as above or that is meant to contribute to that set of processes. The discipline of KM is the study of such processes and their impact on knowledge and operational processing and outcomes. The foregoing implies that KM doesn't directly manage, create or integrate most knowledge outcomes in organizations, but only impacts knowledge processes (performed by operational process agents), which, in turn, impact knowledge outcomes. For example, if a Knowledge Manager changes the rules affecting knowledge production, then the quality of knowledge claims may improve. Or if a KM intervention supplies a new search technology, based on semantic analysis of

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knowledge bases, then that may result in improvement in the quality of business forecasting models. According to Davenport (1994) "Knowledge management is the process of capturing, distributing, and effectively using knowledge." The knowledge management process deals with two specific attributes: sharing existing knowledge and creating new knowledge. The information age makes this business activity crucial to a company's survival. Information flows from business to business, business to consumer, and other methods. Three main practices in the knowledge management process include creating and discovering, sharing and learning, and organizing and managing. Each company can create its own specific method for knowledge management.

- Creating and discovering new data involves the process of data mining, which is a fancy term for gathering information. Companies can use any number of mining methods to create or discover new knowledge. For example, a company may send out customer surveys to inquire about individual buying habits. The information gleaned flows into a company's knowledge management process using any number of technical tasks or individuals who pass information through a company's work flow system. The creation of new information leads to discovery as companies find out information and data from any number of new sources.
- Sharing and learning involves the use of business networks to send and receive information. Sharing means taking information gleaned from a survey or other source and disseminating the information among one or more groups. A knowledge management process often involves numerous departments within a single organization. In other cases, a company may share information with other businesses. This allows multiple companies to learn how to achieve increases in market share or complete other processes better with the hopes of an improved output.
- Organizing and managing is an ongoing activity of the knowledge management process. Organizing is necessary to compare new information against old. Additionally, organization is necessary so a company can refer back to information gathered for specific purposes. Managing information is a similar task associated with the organization of gathered data. Managers must protect information and make it readily available for use at specific times. Multiple individuals in various departments may have the task of managing a company's information.

A knowledge management process often makes heavy use of technology. Current technology allows a company to gather and transmit data extremely fast, often in real time. Increasing use of technology in these processes often results in new business positions or activities a company must complete. For example, a company must protect sensitive information gathered from customers. The knowledge management processes requires this protection as a company may be liable for damages if a customer's data is used illegally.

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1.7 KNOWLEDGE MANAGEMENT AND SUPPORTING CONCEPTS

Maarten Sierhuis provides the following definition of Knowledge Management and supporting concepts:

Knowledge Analysis (KA)

In Knowledge Analysis we model a knowledge source in such a way that we can analyze its usefulness, its weaknesses and its appropriateness within the organization. Knowledge Analysis is a necessary step for the ability to manage knowledge. Within Knowledge Analysis we can use knowledge modeling and knowledge acquisition techniques.

Knowledge Planning (KP)

When an organization has a grip on its knowledge (i.e. has performed Knowledge Analysis), it will be able to plan for the future. An organization will now be able to develop a multi-year knowledge plan that defines how the organization will develop its knowledge resources, either by training its human agents, or by developing knowledge-based systems to support the human agents, or by other means that allow the organization to stay competitive.

Knowledge Technology (KT)

This is, as the word already implies, the (application of) techniques and methods from the field of AI, or to be more specific, the field of knowledge-based systems. KT has been around for quite some time, and most people know about the application of KT in the form of expert systems, and decision support systems. Techniques and methods to design these kind of systems are well known; The best known methodology for building knowledge-based systems is CommonKADS (formerly known as KADS).

Knowledge Management (KM)

This is, as the word implies, the ability to manage "knowledge". We are all familiar with the term Information Management. This term came about when people realized that information is a resource that can and needs to be managed to be useful in an organization. From this, the ideas of Information Analysis and Information Planning came about. Organizations are now starting to look at "knowledge" as a resource as well. This means that we need ways for managing the knowledge in an organization. We can use techniques and methods that were developed as part of Knowledge Technology to analyze the knowledge sources in an organization. Using these techniques we can perform Knowledge Analysis and Knowledge Planning.

Computer Supported Work Systems (CSWS)

This is a formal and informal (human) activity system, within an organization where the (human) agents are supported by computer systems. The application of Knowledge Technology is very helpful in such work systems, although definitely 'not' the only important factor in the analysis and design, nor in the effectiveness of the activity system.

1.8 KNOWLEDGE ENGINEERING

Knowledge engineering is the task of gathering and inputting information for use in knowledge-based computer systems. These systems can solve problems or answer questions without the help of a human expert. Knowledge engineers use a variety of knowledge acquisition techniques tailored to collect specific types of information.

The field of knowledge engineering developed when computer memories became large enough to accommodate huge amounts of information, around 1970. This caused a shift in Artificial Intelligence (AI) technology. In addition to creating AI software that could solve problems and use logic, programmers were able to give the AI a huge database of information to draw from.

Knowledge engineering is a labor-intensive multi-step process. First the knowledge engineer is presented with a problem. For example, the problem could be that of allowing people to find out what their medical symptoms mean without going to see a doctor. The engineer then creates a system that can do this: for instance, a computer program that takes symptoms as input and outputs a list of conditions or diseases that could manifest those symptoms.

Next the engineer needs to gather the necessary information. The engineer might talk to doctors or read medical texts to find information about diseases and symptoms. Once all the information is collected and organized, coders create the system. The engineer inputs the data. The final step in knowledge engineering is testing the system to ensure that it outputs accurate responses.

The most time consuming and, arguably, most important step in the knowledge engineering process is acquiring knowledge. Most of the knowledge needed to create a knowledge-based system resides in the brains of experts. These experts are usually busy people. The challenge the knowledge engineer faces is how to get this information as quickly and efficiently as possible.

Another challenge is how to collect the information that the expert knows implicitly. For example, a doctor may not be able to describe the sound of an asthmatic lung. She just knows it when she hears it.

Knowledge engineers have developed a host of knowledge acquisition techniques to help them gather information. These include protocol-generation techniques, limited information techniques, and matrix-based techniques. Techniques are chosen based on the type of knowledge needed.

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For instance, if an engineer needed information about the steps a doctor goes through to make a diagnosis, he or she might simply interview the doctor. If, however, the information the engineer was looking for was the kind of information that the doctor knows but has trouble putting into words, he or she might use a sorting technique. A sorting technique requires the expert to sort cards with words on them into piles and then name the categories he or she used. This allows the engineer to understand how the expert thinks about the information.

Knowledge Engineering Principles

Since the mid-1980s, knowledge engineers have developed a number of principles, methods and tools that have considerably improved the process of knowledge acquisition. Some of the key principles are summarised as follows:

- Knowledge engineers acknowledge that there are different types of knowledge, and that the right approach and technique should be used for the knowledge required.
- Knowledge engineers acknowledge that there are different types of experts and expertise, such that methods should be chosen appropriately.
- Knowledge engineers recognise that there are different ways of representing knowledge, which can aid the acquisition, validation and re-use of knowledge.
- Knowledge engineers recognise that there are different ways of using knowledge, so that the acquisition process can be guided by the project aims.
- Knowledge engineers use structured methods to increase the efficiency of the acquisition process.

Knowledge Engineering Methodologies

Epistemics is involved in three methodologies to support the development of knowledge systems:

- CommonKADS
- SPEDE
- MOKA

CommonKADS

CommonKADS is the methodology that is most commonly followed at Epistemics when developing knowledge engineering systems.

CommonKADS is a complete methodological framework for the development of a knowledge-based system (KBS). It supports most aspects of a KBS development project, such as:

- Project management
- Organisational analysis (including problem/opportunity identification)

- Knowledge acquisition (including initial project scoping)
- Knowledge analysis and modelling
- Capture of user requirements
- Analysis of system integration issues
- Knowledge system design.

Spede

The SPEDE methodology is a combination of principles, techniques and tools taken from Knowledge Engineering and adapted for use in Knowledge Management. It provides an effective means to capture, validate and communicate vital knowledge to provide business benefit.

The SPEDE methodology was developed under the guidance of Rolls-Royce plc and involved staff from Epistemics acting as consultants. Early versions of PCPACK v4 were tested and developed on a number of SPEDE projects.

With assistance from Epistemics, Rolls-Royce has run over 100 SPEDE projects, involving the training of over 150 employees.

Structure and Deliverables

SPEDE has been specifically developed to act as a training course for novice knowledge engineers or those seconded to a knowledge management activity. SPEDE projects typically involve 1-week of intensive training followed by 2-3 months of scoping, knowledge acquisition and delivery phases.

The main deliverable of most SPEDE projects is an intranet website. However, previous projects have delivered quality procedures, process improvement information and expert systems.

Projects using the SPEDE methodology follow a set of procedures coordinated by experienced staff. All projects have a coach who manages the activities of one or more knowledge engineers on a daily basis.

Moka

MOKA is a methodology for developing knowledge-based engineering applications, i.e. systems that support design engineers. It is particularly aimed at capturing and applying knowledge within aeronautical and automotive industries of the design of complex mechanical products.

Whilst huge benefits can be gained by the use of knowledge-based engineering (KBE) technology, the lack of a recognised methodology has resulted in a significant risk when developing and maintaining KBE applications. MOKA aims to provide such a methodology, that:

- Reduces the lead times and associated costs of developing KBE applications by 20 - 25%.

- Provides a consistent way of developing and maintaining KBE applications.
- Will form the basis of an international standard.
- Makes use of a software tool to support the use of the methodology.

Need for MOKA

Companies have to manage and reuse engineering knowledge to improve business processes, to reduce time to find new solutions, to make correct choices the first time and to retain best practices. The aim of MOKA is to provide a methodology to capture and formalise engineering knowledge to reuse it, for example within KBE applications. Development and maintenance of knowledge intensive software applications is a complex and potentially expensive activity. The number of knowledge-based engineering (KBE) systems used in the aeronautical and automotive industries has increased in recent years. Experience has shown that long-term risk can be reduced by employing a systematic methodology that covers the development and maintenance of such systems. The ESPRIT-IV funded project called MOKA (No. 25418) is intended to satisfy this need by providing both a methodology and a supporting software tool, both of which are independent of any KBE platform.

MOKA Analysis and Modelling

MOKA identifies two models to be used in the KBE application development lifecycle :

1. **Informal Model:** A structured, natural language representation of engineering knowledge using pre-defined forms.
2. **Formal Model:** A graphical, object-oriented representation of engineering knowledge at one level of abstraction above application code.

Within each of these models, various knowledge representations are used to help capture, analyse and structure the knowledge required for KBE applications. Within the informal model, the main knowledge objects are:

- Entities
  - Structural Entities (the components of the product being designed)
  - Functional Entities (the functions of the product and its sub-components)
- Constraints (the design requirements of the product and its sub-components)
- Activities (the tasks performed during the design process)
- Rules (decision points in the design process that affect what tasks to perform)
- Illustrations (examples that illustrate aspects of the product and design)

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1.9 KNOWLEDGE TRANSFER

Knowledge transfer is the sharing of information and procedures across all departments and locations of an organization. Usually, this term applies to large or complex ideas that would require more than one brief conversation or letter to impart. As such, this form of learning is generally accomplished by specific programs designed for this purpose.

Technology has vastly improved knowledge transfer from a business to its workers. Most data needed for daily operations of an organization is easily accessible via computer. Standard operating procedures, customer information, and product information are all available at the touch of a button. Even daily memos are often organized and archived for easy retrieval.

In an attempt to expand the collective information of an organization, managers often implement programs to gather information directly from their workers. For example, an employee involved in a work-related accident may be interviewed to determine the events that led to the mishap. That information may be used to create standard operating procedures to avoid the same set of circumstances.

Likewise, an individual who has participated in a large project may be interviewed or surveyed as to his or her experiences. This person is often encouraged to list both positive and negative aspects and to offer suggestions on how the process could have been improved. Knowledge transfer of this type enhances future experiences and improves productivity.

In many case, hands-on experience is much more valuable to knowledge transfer than even the most comprehensive database. Company descriptions of job responsibilities very rarely paint accurate pictures of daily job functions. The bridge between company expectations and reality can only be described by the individual that is in the trenches doing the job. As such, programs like knowledge fairs and information exchanges are invaluable. These programs provide opportunities for employees in different stations to exchange practical knowledge in conversational atmospheres.

Another approach to increasing this type of knowledge transfer is to expose employees to the as many job positions as possible. Job rotation initiatives, which change the duties and responsibilities of each worker on a set schedule, excel at introducing workers to all aspects of company operations. Other programs, such as mentoring, internships, and classic classroom training are also effective to varying degrees.

One of the biggest benefits to an effective knowledge transfer system is a diversity of ideas and operating styles. Frequently, this leads to more effective problem-solving and more practical development of best practice procedures. Improved employee morale is often a pleasant side effect of this increased cohesion.

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Barriers to Knowledge Transfer

To understand more about knowledge transfer, it is essential to know about the barriers to transferring best practices in an organization. There is a need to develop a model for the process in which knowledge is transferred, and the obstacles in the different stages of the process can be studied. The critical hurdles to knowledge transfer are as below:

- Receiver of the knowledge has shortage of absorptive capacity
- Characteristics of the knowledge being handed over
- Rapport between informers and receivers

Characteristics of Knowledge Transfer

The speed with which the transfer of knowledge takes place is also important since it has to reach the recipient at the correct time and within acceptable cost. Knowledge received late and at an extra cost will not bring any benefit to the organization. It seems that the speed of the knowledge transfer will depend on the tacit nature of the knowledge. The tacit nature of the knowledge is fundamentally dependent upon two factors:

- First of all, the knowledge has to be codifiable
- Secondly, it should be teachable.

If these are possible, the transfer of knowledge will take place speedily.

It is also seen that the communication and the frequency of discussions between knowledge source and recipient are important factors of knowledge transfer. In addition, the type of knowledge transferred is also significant. The knowledge can be related to business, project or technology. The recipient has to be capable enough in the respective field to have the knowledge successfully imparted.

Knowledge Stickiness

Consider an instance of building a new system. Knowledge transfer can be visualised as consisting of a source which can be a system user and a receiver who is the system builder. The difficulty faced in the process of knowledge transfer is called knowledge stickiness. A methodical and concentrated inspection of the aspects which result in stickiness while systems are built will be useful to handle the issues that come up as a result of shortage of needed knowledge transfer among the user and the builder. The level of stickiness during the knowledge transfer process depends on the following factors:

- The character of knowledge
- The features of sources and receivers
- The character of the association grown between sources and receivers

While knowledge transfer is taking place, the above three aspects, scheme together for triggering stickiness. It is important to handle stickiness carefully to enhance the process of knowledge transfer.

Check Your Progress

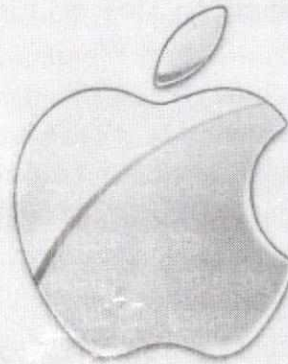
Fill in the Blanks

4. .... is based on the idea that an organisation's most valuable resource is the knowledge of its people.
5. A .... activity is one that has the same goal as above or that is meant to contribute to that set of processes.
6. .... is the task of gathering and inputting information for use in knowledge-based computer systems.
7. .... is the sharing of information and procedures across all departments and locations of an organization.

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Case Study of Apple Inc: "Think Different"

Steve Jobs and Steve Wozniak founded Apple on April 1, 1976. The two Steves, Jobs and Woz (as he is commonly referred to - see woz.org), have personalities that persist throughout Apple's products, even today. Jobs was the consummate salesperson and visionary while Woz was the inquisitive technical genius. Woz developed his own homemade computer and Jobs saw its commercial potential. After selling 50 Apple I computer kits to Paul Terrell's Byte Shop in Mountain View, CA, Jobs and Woz sought financing to sell their improved version, the Apple II.



They found their financier in Mike Markkula, who in turn hired Michael Scott to be CEO. The company introduced the Apple II on April 17, 1977, at the same time Commodore released their PET computer. Once the Apple II came with Visicalc, the progenitor of the modern spreadsheet program, sales increased dramatically. In 1979, Apple initiated three projects in order to stay ahead of the competition: 1) the Apple III – their business-oriented machine, 2) the Lisa – the planned successor to the Apple III, and 3) Macintosh.

In 1980, the company released the Apple III to the public and was a commercial flop. It was too expensive and had several design flaws that made for less-than-stellar quality. One design flaw was a lack of cooling fans, which allowed chips to overheat. In late 1980, Apple went public, making the two Steves and Markkula wealthy – to the tune of nine figures. By 1981, the Apple III was not selling well and Scott infamously fired 40 people on Feb 25 ("Black Wednesday"). Scott's direct management style conflicted with the culture Jobs and Markkula preferred, and Scott resigned in July. Markkula stepped into his position as CEO. In August 1981, IBM released their PC. Unimpressed and unafraid, Apple welcomed IBM to the PC market with a slightly smug full-page ad in the Wall Street Journal. It would not be long before IBM's PC dominated the market.

The Xerox Alto was the inspiration for Apple's Lisa. Apple employees were able to examine the Alto in exchange for allowing Xerox to invest in Apple

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before Apple's initial public offering (IPO). Apple released the Lisa in January 1983 and was notable for being the first computer sold to the public that utilized a Graphic User Interface (GUI). Unfortunately, the Lisa was not compatible with existing computers, and therefore came bundled "with everything and a list price to match." At $9,995 (over $21,000 in 2005 dollars), the Lisa missed its target market by a wide margin.

Jobs attempted to control the Lisa project. Scott, unimpressed with the performance of Jobs on the Apple III project, had Jobs head up the dog-and-pony show for the pending IPO. Jobs, looking for a project to lead, inserted himself into the Macintosh development team. Using his considerable influence, Jobs was able to procure the resources to produce a computer that was faster than Lisa, used a GUI, had a mouse, and sold for ¼th of Lisa's price. Apple introduced the Macintosh with great fanfare during the 1984 Super Bowl. The Orwellian-themed commercial (directed by Ridley Scott, of 'Alien' fame) portrayed IBM as Big Brother and embodied Macintosh and Apple as freedom-seeking individuals breaking away from this oppressive regime.The commercial was largely successful and sales for the Mac started strong. However, Mac sales later faded. John Sculley left PepsiCo to join Apple in April 1983. He was famous for engineering the "Pepsi Challenge", in which blinded testers tasted both Coke and Pepsi to unveil the 'truth' of the taste of Pepsi. In response to lagging Mac sales, Sculley contrived the 'Test Drive a Macintosh' campaign. In this promotion, prospective users could take home a Macintosh with only a refundable deposit on their credit card. While lauded by the public and the advertising industry, this campaign was a burden on dealers and significantly impeded the availability of Macs to serious buyers. In 1985, Apple tried to have lightening strike twice with their 'Lemmings' commercial during the Super Bowl. In what was becoming Apple's typical patronizing fashion, this commercial insulted current PC users by portraying them as witless lemmings, unthinkingly doing harm to themselves. Although Jobs attempted to overthrow Sculley, the board backed Sculley. Jobs left Apple to form NeXT computer. After Jobs left in 1985, sales of the Mac "exploded when Apple's LaserWriter met Aldus PageMaker." Apple dominated the desktop publishing market for years to come. Under Sculley, Apple grew from $600 million in annual sales to $8 billion in annual sales by 1993. Apple introduced Mac Portables in 1989 and the first PowerBooks in 1991. By 1992, PC competition ate into Apple's margins and earnings were falling. Sculley was under pressure to have Apple produce another breakout product. He focused his energy on the Newton – Apple's introduction of the Personal Digital Assistant (PDA). Despite Sculley generating substantial demand for Newton, it did not live up to the hype due to it being severely underdeveloped. Sculley resigned in 1993 and Michael Spindler replaced him.

Spindler spent most of his time and energies on regaining profitability, with the end goal of finding a buyer for Apple. Over the next several years,

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Spindler shopped Apple to Sun Microsystems, Eastman Kodak, AT&T, and IBM. Meanwhile, Apple was unable to meet the growing demand for its products due to supplier problems and faulty demand predictions. To add insult to injury, Microsoft released Windows 95 with great fanfare in 1995. After significant quarterly losses in 1996, the board replaced Spindler with Dr. Gil Amelio, CEO of National Semiconductor. Dr. Amelio tried to bring Apple back to basics, simplifying the product lines and restructuring the company. One of Apple's most pressing issues at the time was releasing their next generation operating system (code named "Copland") to compete with Windows 95. Amelio and his technology officers found that Copland was so behind schedule that they looked outside the company to purchase a new OS. Ultimately, and somewhat ironically, they decided to purchase NeXT computer from Jobs. Naturally, Apple welcomed Jobs back into the fold. The board became increasingly impatient with Amelio due to sales not rebounding quickly enough. Apple bought out Amelio's contract after just 1 ½ years on the job. Jobs eventually claimed the CEO position. Then, he cleaned house by revamping the board of directors and even replacing Mike Markkula (who had been with the company since the beginning). Jobs simultaneously put an end to the fledgling clone licensing agreements (which created a few Mac clones) and entered into cross-licensing agreements with Microsoft. On May 6, 1998, Apple introduced the new iMac, a product so secret that most Apple employees had never heard of it. The new iMac was a runaway success with its translucent case, all-in-one architecture, and ease of use. It brought Apple to a new market of users – those who had never owned a computer before. Jobs further simplified the product lines into four quadrants along two axes: Desktop and Portable on one, Professional and Consumer on the other. Apple completed the matrix with the introduction of the consumer-based iBook in 1999.

The year 2001 was an important year for consumers of Apple products. Apple opened their first 25 retail stores (totaling 163 stores in 4 countries as of May 2006). In September 2001, Apple introduced the new iMac featuring a screen on a swivel.The new iPods (portable music players) were a tremendous success. Apple sold so many that Apple's dependence on Mac sales was significantly less. This was no small feat considering that the 2001 iMac became Apple's best-selling product "by a long shot". Apple offered iTunes (a free application) to help their consumers organize music on iPods and Macs.

In 2003, Apple expanded iTunes by 1) opening the iTunes music store to allow Mac users to purchase music online and 2) expanding iTunes to Windows users. Sales of iPods skyrocketed and currently provide the bulk of product sales to Apple. In 2005, Apple announced that it would start using Intel-based chips to run Macintosh computers. In April 2006, Apple announced Boot Camp, which allows users of Intel-based Macs to boot either Mac or Windows OS. This functionality allows users who may need both OSs to own just one machine to run both, albeit not simultaneously.

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The three major competitors of Apple are DELL, Hewlett-Packard and IBM, however Apple also competes with Microsoft in software industry. DELL is the largest computer manufacturer with extremely low cost production strategy. DELL has entered in the line of music against Apple by its Jukebox. Hewlett Packard is a big brand name and leading provider of technology. Apple combined with IBM enjoyed profit jointly but now Lenovo took over IBM and became a competitor of Apple.

Apple's new products like speech recognition program will help take industry into a new age of computers and is according to the company's motto and it is hoped that it will double the profit margin in the near future. Overall, Apple is continuously growing and its future seems bright. With the slight change in their strategies, they can become giants in technology industry.

Source: *http://www.mbaknol.com/management-case-studies/case-study-of-apple-inc-think-different/*

1.10 SUMMARY

- Knowledge Management (KM) is a concept and a term that arose approximately two decades ago, roughly in 1990.
- CoPs are the groups of individuals with shared interests that come together in person or virtually to tell stories, to share and discuss problems and opportunities, discuss best practices, and talk over lessons learned (Wenger, 1998; Wenger & Snyder, 1999).
- There are two main aspects of knowledge management, namely, information management and people management. Viewed from this perspective, knowledge management is about information, on one hand, and people, on the other.
- The 'Data Information Knowledge Wisdom Hierarchy' is an epistemological system usually associated with Russell Ackoff (Ackoff, 1989) although elements of it are prefigured in the work of Milan Zeleny (1987) and in more poetic form in T.S. Eliot (above) and in the lyrics of a song by Frank Zappa.
- The value of Knowledge Management relates directly to the effectiveness with which the managed knowledge enables the members of the organization to deal with today's situations and effectively envision and create their future.
- According to R. Gregory Wenig Knowledge Management (for the organization) consists of activities focused on the organization gaining knowledge from its own experience and from the experience of others, and on the judicious application of that knowledge to fulfill the mission of the organization.
- Knowledge Management is the set of processes that seeks to change the organization's present pattern of knowledge processing to enhance both it and its outcomes.

- Knowledge engineering is the task of gathering and inputting information for use in knowledge-based computer systems. These systems can solve problems or answer questions without the help of a human expert.
- Knowledge transfer is the sharing of information and procedures across all departments and locations of an organization.

1.11 KEY TERMS

- **Communities of Practice (CoPs):** CoPs are groups of individuals with shared interests that come together in person or virtually to tell stories, to share and discuss problems and opportunities, discuss best practices, and talk over lessons learned (Wenger, 1998; Wenger & Snyder, 1999).
- **Knowledge Management:** Knowledge Management is the set of processes that seek to change the organization's present pattern of knowledge processing to enhance both it and its outcomes.
- **Knowledge engineering:** Knowledge engineering is the task of gathering and inputting information for use in knowledge-based computer systems. These systems can solve problems or answer questions without the help of a human expert.
- **Knowledge transfer:** Knowledge transfer is the sharing of information and procedures across all departments and locations of an organization.

1.12 ANSWERS TO 'CHECK YOUR PROGRESS'

1. "Knowledge management is the process of capturing, distributing, and effectively using knowledge."
2. Explicit knowledge is knowledge that can be captured and written down in documents or databases. Examples of explicit knowledge include instruction manuals, written procedures, best practices, lessons learned and research findings.
3. Tacit knowledge is the knowledge that people carry in their heads. It is much less concrete than explicit knowledge.
4. Knowledge management
5. Discrete knowledge management
6. Knowledge engineering
7. Knowledge transfer

1.13 QUESTIONS AND EXERCISES

Short Answer Questions

1. Define knowledge management.
2. What do you mean by Communities of Practice (CoPs)?
3. What are the different types of knowledge?
4. What are the key elements of knowledge management?
5. Define knowledge engineering.
6. What are the key barriers to knowledge transfer?

Long Answer Questions

1. Discuss the meaning, nature and types of knowledge management.
2. What are the key aspects of knowledge?
3. Discuss Data>Information>Knowledge>Wisdom Continuum.
4. Discuss the value of knowledge management.
5. Write a note on knowledge management as:
   - Type of activity
   - Set of process
6. What are the key supporting concepts of KM?
7. Define knowledge engineering. What are the key principles and methodologies of knowledge management?
8. Discuss the meaning and characteristics of knowledge transfer.

UNIT 2 PROCESS OF KNOWLEDGE MANAGEMENT

Structure

2.0 INTRODUCTION

Knowledge management is the concept of taking data and turning it into useful and applicable knowledge in a business environment. There is no one specific way that this done, and there's really no one specific definition of the process or the concept. The ideas are more general, though there are many specific benefits of knowledge management that can be named as well as some specific steps that must be included, no matter how simple or complex an organization's concept of knowledge management is. The knowledge management process can have a few steps or dozens, but those steps fall into the falling basic categories:

- **Data Capture:** Raw data must be collected somehow before it can be turned into knowledge, or wisdom as the last step in the process is often called.
- **Data Storage:** There has to be a place to keep the collected information. Data storage for most businesses and even individuals today is digital, but even a filing cabinet is a data storage solution.

- **Data Organization:** Once the data is collected it has to be organized into some kind of a useful structure. For instance, a piece of paper that contains raw data like sales figures numbers, number of employees, prices of products, employee attendance numbers and last quarter's profits is full of raw data, but it's a collection that's not organized and can't be easily used in this format.
- **Data Analysis:** This often melds in with the organization step, as the act of organizing data often requires analysis. Once the data is analyzed, then it's more likely to be knowledge than just raw information because the way the information works together and things like cause and effect become more obvious. Patterns become obvious, and those can be used to illustrate general concepts. This turns the information into useful knowledge.
- **Knowledge Sharing:** At this point, the raw data has become useful knowledge or wisdom. While this is an improvement over raw, unorganized data, it's necessary to determine the best way to share this wisdom with employees to make it truly useful on a daily basis, and to use it to reach organizational goals.

The entire point of gathering data, storing it, organizing, analyzing it and sharing it is so that the company can use vital business information to see what needs to be done, what needs to be improved, what can be eliminated, what needs to be maximized and what's possible in the future. The knowledge from this information processing cycle can be used to reach goals, whether those goals are more sales, more clients, less waste, more employee productivity, a better public image or almost any type of goal a company could have. Knowledge can be used to further those goals if it's gathered and processed correctly.

The knowledge management process has not always been something that companies have focused on, at least not in a formal way. Few people in a company several years ago would have used the term "knowledge management." But companies that were successful have always practiced knowledge management whether they called it that or not. Gathering data and turning it into useful information and shared knowledge has always been crucial.

To illustrate the process, consider that you and another person want to pool your money to purchase something at a store. You'll need to know how much money you have and how much the item costs. You write down ₹ 20, ₹ 10 and ₹ 5. That is data that you've stored by writing it down. Those numbers mean nothing, because they're raw data with no context. Once you have these numbers, you have gathered data but it's essentially useless.

Now the data must be organized. You make it clear that the ₹ 20 is what the item costs, and that you have ₹ 10 to contribute and your friend has ₹ 5. Now you must analyze the data. This leads you to see that you don't have enough money to purchase the item, and that your friend needs to contribute another ₹ 5 in order to make it possible. You pass that information to share the knowledge. Now your friend also knows that it's necessary to add ₹ 5. What started as 3 raw numbers have now become useful knowledge that helps in setting a goal.

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2.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Discuss KM as business process,
- State the 3-tier conceptualization of KM,
- Discuss KM as management of information, people and knowledge workers,
- Identify the knowledge dimensions,
- Describe the knowledge spiral modal of Nonaka & Takeuchi.

2.2 KNOWLEDGE MANAGEMENT AS A BUSINESS PROCESS

"If you have an apple and I have an apple and we exchange these apples then you and I will still have one apple each. But if you have an idea and I have an idea and we exchange these ideas, then each of us will have two ideas."

George Bernard Shaw

Knowledge is the accumulated experience and actionable information that exists within an organisation. It is information that has already been put into use and has a capacity to be acted upon. Knowledge is what people know – about their work, about how to get things done, about their products and services, their customers, competitors and their capabilities. It's there in their minds, it's in the documents and it's often hidden in the processes that connect people together in teams and workgroups. As Peter Drucker puts it "In the new economy, knowledge is not just another resource alongside the traditional factors of production, labour, capital and land, but the only meaningful resource today. The challenge we face is simple – knowing what we know – and realizing that there is often a huge difference between a process outlined in the company manual and the realities of everyday business life.

Every organisation has a structure and processes, and these operate on a number of levels. The buildings, in which you work, and their geographical location, provide a physical structure. The way the organisation is divided into departments and functions provides another form of structure. How people are organised into hierarchies and the relationships between them provides another. The way that resources are allocated – finances, technology, equipment, etc. – provides yet another. Each of these types and layers of structure will have an impact on how knowledge is created, shared and used in an organisation. For example:

- Does everyone in your organisation have ready access to a computer? Do they know how to use it?
- Is everyone located in the same building or are they dispersed across different buildings or even different towns or regions?

- Within each building, how is the space organised? Are people shut off from each other in offices with closed doors or is the space more open? Are managers located in the same areas as their teams, are they visible and accessible, or are they hidden away in a private area? Are there areas where people can simply "be" together – such as a café, or chairs and tables near a coffee machine, or informal "breakout rooms" – in addition to formal office and meeting space?
- What is the nature of the relationship between various departments and functions? Is it competitive or collaborative? How is this sustained, for example do departments have to compete for resources? Or is there a higher "status" attached to some departments over others?
- Is your organisation very hierarchical with lots of layers of management and staff, and long chains of command? Or is it a flatter, more functional structure? Do people's job titles reflect that hierarchy and imply status, or do they simply describe what a person does?
- How do people go about their jobs? Are there set processes and procedures in place to do particular jobs that people must follow? Or is there scope for creativity and initiative? Do these processes include knowledge components? Do people have time to seek and share knowledge and to reflect on it as they go about their work, or are they always under pressure to get the job done and produce results?

Often, the best way to find out whether and how an organisation's infrastructure and processes are helping or hindering people is to ask them. But before you do, be aware of the impact of both infrastructure and culture on people's willingness to tell the truth – does your organisation make it safe for them to speak their mind openly?

Implementing KM in your Business

In bringing knowledge management into your organisation, you will need to select and implement a number of processes that will help your organisation to be better at creating, finding, acquiring, organising, sharing and using the knowledge it needs to meet its goals. There are many such processes, including for example:

- Conducting knowledge audits to identify knowledge needs, knowledge resources and knowledge flows.
- Creating knowledge strategies to guide the overall approach.
- Connecting people with people to share tacit knowledge using approaches such as communities of practice or learning events.
- Connecting people with information to share explicit knowledge using approaches such as best practices databases, and using content management processes to ensure that explicit knowledge is current, relevant and easily accessible.

- Creating opportunities for people to generate new knowledge, for example through collaborative working and learning.
- Introducing processes to help people seek and use the knowledge of others such as peer assists.
- Teaching people to share knowledge in ways that inspire people by using storytelling techniques.
- Encouraging people to prioritise learning as part of their day-to-day work, by learning before, during and after the tasks and projects they have performed.

You can find more details of each of these in the KM toolbox. Some knowledge management processes are fairly new to organisations but many are not – they are simply being considered from a new perspective, that of focusing on knowledge. There is no "perfect" process nor is there a "one size that fits all". Your choice of processes will depend on the nature of your organisation.

2.3 TIERS CONCEPTUALIZATION OF KM: KNOWLEDGE MANAGEMENT>KNOWLEDGE PROCESS>BUSINESS PROCESS

Here is a a three-tier framework of business processes and outcomes distinguishing operational business processes, knowledge processes, and processes for managing knowledge processes. Operational processes are those that use knowledge but, apart from routinely produced knowledge about specific events and conditions, don't produce or integrate it. Examples of outcomes are Sales Revenue, Market Share, Customer Retention and Environmental Compliance. Below is the pictorial representation of the three-tier framework:

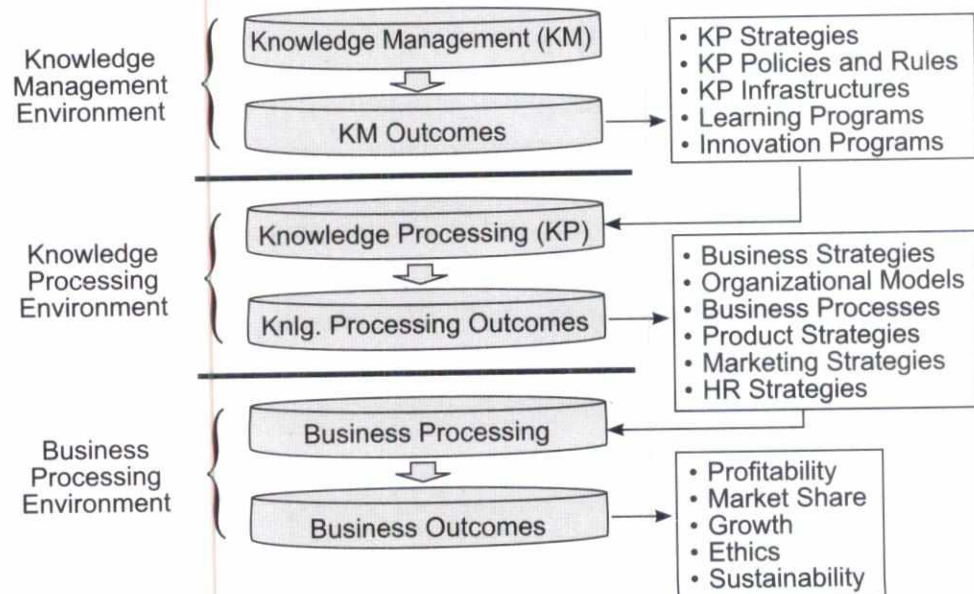


Fig. 2.1: Three Tier Framework

There are two knowledge processes: knowledge production, the process an organization executes that produces new general knowledge and other knowledge whose creation is non-routine; and knowledge integration, the process that presents this new knowledge to individuals and groups comprising the organization. Examples of outcomes are new organizational strategies communicated throughout an enterprise using e-mail, and new health insurance policies communicated through a new release of the organization's personnel manual.

Knowledge Management is the set of processes that seeks to change the organization's present pattern of knowledge processing to enhance both it and its outcomes. A discrete Knowledge Management activity is one that has the same goal as above or that is meant to contribute to that set of processes. The discipline of KM is the study of such processes and their impact on knowledge and operational processing and outcomes. The foregoing implies that KM doesn't directly manage, create or integrate most knowledge outcomes in organizations, but only impacts knowledge processes (performed by operational process agents), which, in turn, impact knowledge outcomes. For example, if a Knowledge Manager changes the rules affecting knowledge production, then the quality of knowledge claims may improve. Or if a KM intervention supplies a new search technology, based on semantic analysis of knowledge bases, then that may result in improvement in the quality of business forecasting models.

2.4 KNOWLEDGE MANAGEMENT AS MANAGEMENT OF INFORMATION

In the early days of knowledge management, there was a strong focus on information technology (IT). As knowledge management became the latest buzzword, technology vendors were quick to spot an opportunity to sell "knowledge management solutions" and many of the companies that led the way in knowledge management were quick to buy – to their cost. Having made significant investments in the latest systems, they then found that people simply did not use them and so the systems ended up being confined to what became known as "the knowledge management graveyard". These companies learned the hard way that knowledge management is about people, processes and technology – in that order of priority.

That being said, technology is an important enabler of many, if not most, knowledge management initiatives. Technology can support and enable knowledge management in two main ways:

- It can provide the means for people to organise, store and access explicit knowledge and information, such as in electronic libraries or best practices databases.
- It can help to connect people with people so that they can share tacit knowledge, such as through white pages, groupware or video conferencing.

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Much of the early focus on technology was driven by an over-focus on explicit knowledge – on "getting things down" and into high-level databases. However, given the current view that up to 80% of an organisation's knowledge is always going to be in people's heads, there is a growing interest in technologies that support communication and collaboration between people.

Technology adds value when it reduces the cost, time and effort needed for people to share knowledge and information. However, if it is not closely aligned with organisational needs and with people's ways of working, or if it results in information overload and so people can no longer make sense of it all, then even with the best technology in the world, you will end up right back at square one: people still cannot easily find the knowledge and information they need. The importance of this cannot be overemphasised.

The reality is that technology can only fulfill some of our needs. And how well it fulfils them depends critically on managing the knowledge behind them – content management, assigning knowledge roles etc. There are many tools that can help enable individuals and organisations to be more effective at accessing and sharing their knowledge. How well we exploit these opportunities depends more on good knowledge management than on finding the "best" piece of technology. In other words, technology by itself does not create shared knowledge: it needs to be supported by, and integrated with, relevant people and processes. Tom Davenport, a prominent author on knowledge management, is often quoted as offering the following rule of thumb: your investment in technology in terms of both cost and effort should stay under one third of the total knowledge management effort – otherwise you are going wrong somewhere.

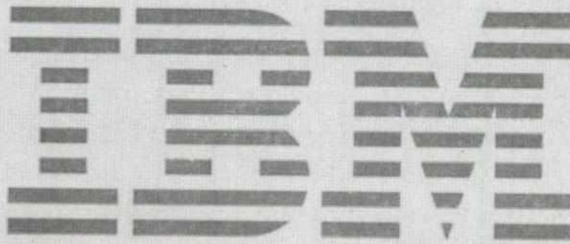
So, what kinds of technology are we talking about? The following is a brief and simple overview, aimed at giving the non-technical manager an overall idea of some of the knowledge-enabling technologies currently available.

Case Study of IBM: Employee Training through E-learning

"E-learning is a technology area that often has both first-tier benefits, such as reduced travel costs, and second-tier benefits, such as increased employee performance that directly impacts profitability." - Rebecca Wettemann, research director for Nucleus Research

In 2002, the International Business Machines Corporation (IBM) was ranked fourth by the Training magazine on its "The 2002 Training Top 100". The magazine ranked companies based on their commitment towards workforce development and training imparted to employees even during periods of financial uncertainty.

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Since its inception, IBM had been focusing on human resources development: The company concentrated on the education and training of its employees as an integral part of their development. During the mid 1990s, IBM reportedly spent about $1 billion for training its employees. However, in the late 1990s, IBM undertook a cost cutting drive, and started looking for ways to train its employees effectively at lower costs. After considerable research, in 1999, IBM decided to use e-learning to train its employees. Initially, e-learning was used to train IBM's newly recruited managers.

IBM saved millions of dollars by training employees through e-learning. E-learning also created a better learning environment for the company's employees, compared to the traditional training methods. The company reportedly saved about $166 million within one year of implementing the e-learning program for training its employees all over the world. The figure rose to $350 million in 2001. During this year, IBM reported a return on investment (ROI) of 2284 percent from its Basic Blue e-learning program. This was mainly due to the significant reduction in the company's training costs and positive results reaped from e-learning. Andrew Sadler, director of IBM Mindspan Solutions, explained the benefits of e-learning to IBM, "All measures of effectiveness went up. It's saving money and delivering more effective training,' while at the same time providing five times more content than before." By 2002, IBM had emerged as the company with the largest number of employees who have enrolled into e-learning courses.

However, a section of analysts and some managers at IBM felt that e-learning would never be able to replace the traditional modes of training completely. Rick Horton, general manager of learning services at IBM, said, "The classroom is still the best in a high-technology environment, which requires hands-on laboratories and teaming, or a situation where it is important for the group to be together to take advantage of the equipment."

Though there were varied opinions about the effectiveness of e-learning as a training tool for employees, IBM saw it as a major business opportunity and started offering e-learning products to other organizations as well. Analysts estimated that the market for e-learning programs would grow from $2.1 billion in 2001 to $33.6 billion in 2005 representing a 100 percent compounded annual growth rate (CAGR).

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Background Note

Since the inception of IBM, its top management laid great emphasis on respecting every employee. It felt that every employee's contribution was important for the organization. Thomas J. Watson Sr. (Watson Sr.), the father of modern IBM had once said, "By the simple belief that if we respected our people and helped them respect themselves, the company would certainly profit." The HR policies at IBM were employee-friendly. Employees were compensated well – as they were paid above the industry average in terms of wages. The company followed a 'no layoffs' policy. Even during financially troubled periods, employees were relocated from the plants, labs and headquarters, and were retrained for careers in sales, customer engineering, field administration and programming.

IBM had emphasized on training its employees from the very beginning. In 1933 (after 15 years of its inception), the construction of the 'IBM Schoolhouse' to offer education and training for employees, was completed. The building had Watson Sr.'s 'Five Steps of Knowledge' carved on the front entrance. The five steps included 'Read, Listen, Discuss, Observe and Think.' Managers were trained at the school at regular intervals.

To widen their knowledge base and broaden their perspectives, managers were also sent for educational programs to Harvard, the London School of Economics, MIT and Stanford. Those who excelled in these programs were sent to the Advanced Managers School, a program offered in about forty colleges including some in Harvard, Columbia, Virginia, Georgia and Indiana. IBM's highest-ranking executives were sent to executive seminars, organized at the Brookings Institutions. This program typically covered a broad range of subjects including, international and domestic, political and economic affairs. IBM executives were exposed to topical events with a special emphasis on their implications for the company.

In 1997, Louis Gerstner (Gerstner), the then CEO of IBM, conducted a research to identify the unique characteristics of best executives and managers. The research revealed that the ability to train employees was an essential skill, which differentiated best executives and managers. Therefore, Gerstner aimed at improving the managers' training skills. Gerstner adopted a coaching methodology of Sir John Whitmore, which was taught to the managers through training workshops.

However, after some time, Gerstner realized that the training workshops were not enough. Moreover, these workshops were not 'just-in-time.' Managers had to wait for months before their turn of attending the workshops came. Therefore, in most of the cases, during the initial weeks at the job, the employees did not possess the knowledge of critical aspects like team building.

IBM trained about 5,000 new managers in a year. There was a five-day training program for all the new managers, where they were familiarized with

the basic culture, strategy and management of IBM. However, as the jobs became more complex, the five-day program turned out to be insufficient for the managers to train them effectively. The company felt that the training process had to be continuous and not a one-time event.

Gerstner thus started looking for new ways of training managers. The company specifically wanted its management training initiatives to address the following issues:

- Management of people across geographic borders
- Management of remote and mobile employees
- Digital collaboration issues
- Reductions in management development resources
- Limited management time for training and development
- Management's low comfort level in accessing and searching online HR resources

The company required a continuous training program, without the costs and time associated with bringing together 5,000 managers from all over the world. After conducting a research, IBM felt that online training would be an ideal solution to this problem. The company planned to utilize the services of IBM Mindspan Solutions to design and support the company's manager training program. This was IBM's first e-learning project on international training.

Online Training at IBM

In 1999, IBM launched the pilot Basic Blue management training program, which was fully deployed in 2000. Basic Blue was an in-house management training program for new managers. It imparted 75 percent of the training online and the remaining 25 percent through the traditional classroom mode. The e-learning part included articles, simulations, job aids and short courses.

The founding principle of Basic Blue was that 'learning is an extended process, not a one-time event." Basic Blue was based on a '4-tier' blended learning model'. The first three tiers were delivered online and the fourth tier included one-week long traditional classroom training. The program offered basic skills and knowledge to managers so that they can become effective leaders and people-oriented managers.

The managers were provided access to a lot of information including a database of questions, answers and sample scenarios called Manager QuickViews. This information addressed the issues like evaluation, retention, and conflict resolution and so on, which managers came across. A manager who faced a problem could either access the relevant topic directly, or find the relevant information using a search engine. He/she had direct access to materials on the computer's desktop for online reading. The material also highlighted other

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important websites to be browsed for further information. IBM believed that its managers should be aware of practices and policies followed in different countries. Hence, the groups were foremen virtually by videoconferencing with team members from all over the world,"

In the second tier, the managers were provided with simulated situations. Senior managers trained the managers online. The simulations enabled the managers to learn about employee skill-building, compensation and benefits, multicultural issues, work/life balance— issues and business— conduct— in an interactive manner. Some of the content for [his tier was offered by Harvard Business School and the simulations were created by Cognitive Arts of Chicago. The online Coaching Simulator offered eight scenarios with 5,000 scenes of action, decision points and branching results. IBM Management Development's website, Going Global offered as many as 300 interactive scenarios on culture clashes.

In the third tier, the members of the group started interacting with each other online. This tier used IBM's collaboration tools such as chats, and team rooms including IBM e-learning products like the Team-Room, Customer-Room and Lotus Learning Space. Using these tools, employees could interact online with the instructors as well as with peers in their groups. This tier also used virtual team exercises and included advanced technologies like application sharing, live virtual classrooms and interactive presentation: on the web. In this tier, the members of the group had to solve problems as a team by forming virtual groups, using these products. Hence, this tier focused more on developing the collaborative skills of the learners.

Though training through e-learning was very successful, IBM believed that classroom training was also essential to develop people skills. Therefore, the fourth tier comprised a classroom training program, known as 'Learning Lab.' By the time the managers reached this tire, they all reached a similar level of knowledge by mastering the content in the first three tiers. Managers had to pass an online test on the content provided in the above three tiers, before entering the fourth tier. In the fourth tier, the managers had to master the information acquired in the above three tiers and develop a deeper understanding and a broader skills set. There were no lectures in these sessions, and the managers had to learn by doing and by coordinating directly with others in the classroom.

The tremendous success of the Basic Blue initiative encouraged IBM to extend training through e-learning to its sales personnel and experienced managers as well. The e-learning program for the sales personnel was known as 'Sales Compass,' and the one for the experienced managers, as 'Managing@ IBM.' Prior to the implementation of the Sales Compass e-learning program, the sales personnel underwent live training at the company's headquarters and training campuses. They also attended field training program, national sales conferences and other traditional methods of training. However, in most of the cases these

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methods proved too expensive, ineffective and time-consuming. Apart from this, coordination problems also cropped up, as the sales team was spread across the world. Moreover, in a highly competitive market, IBM could not afford to keep its sales team away from work for weeks together.

Though Sales Compass was originally started in 1997 on a trial basis to help the sales team in selling business intelligence solutions to the retail and manufacturing industries, it was not implemented on a large scale. But with the success of Basic Blue, Sales Compass was developed further. The content of the new Sales Compass was divided into five categories including solutions (13 courses), industries (23 courses), personal skills (2 courses), selling skills (11 courses), and tools and job aid (4 aids).

The sales personnel of IBM across the globe could use the information from their desktops using a web browser. Sales Compass provided critical information to the sales personnel helping them to understand various industries (including automotive, banking, government, insurance etc.) in a much better manner. The information offered included industry snapshots, industry trends, market segmentation, key processes, positioning and selling industry solutions and identifying resources.

It also enabled the sales people to sell certain IBM products designed for Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), Business Intelligence (BI), and so on. Sales Compass also trained the sales personnel on skills like negotiating and selling services. Like the Basic Blue program, Sales Compass also had simulations for selling products to a specific industry like banking, about how to close a deal, and so on. It also allowed its users to ask questions and had links to information on other IBM sites and related websites.

Sales Compass was offered to 20,000 sales representatives, client relationship representatives, territory representatives, sales specialists, and service professionals at IBM. Brenda Toan (Toan), global skills and learning leader for IBM offices across the world, said, "Sales Compass is a just-in-time, just-enough sales support information site. Most of our users are mobile. So they are, most of the times, unable to get into a branch office and obtain information on a specific industry or solution. IBM Sales Compass provides industry-specific knowledge, advice on how to sell specific solutions, and selling tools that support our signature selling methodology, which is convenient for these users."

IBM also launched an e-learning program called 'Managing @ IBM' for its experienced managers, in late 2001. The program provided content related to leadership and people management skills, and enabled the managers to meet their specific needs. Unlike the Basic Blue program, this program enabled managers to choose information based on their requirements. The program included the face-to-face Learning Lab, e-learning, and Edvisor, a sophisticated Intelligent Web Agent. Edvisor offered three tracks offering various types of information.

By implementing the above programs, IBM was able to reduce its training budget as well as improve employee productivity significantly. In 2000, Basic Blue saved $16 million while Sales Compass saved $21 million. In 2001, IBM saved $200 million and its cost of training per-employee reduced significantly – from $400 to $135. E-learning also resulted in a deeper understanding of the learning content by the managers. It also enabled the managers to complete their classroom training modules in lesser time, as compared to the traditional training methods used earlier. The simulation modules and collaboration techniques created a richer learning environment. The e-learning projects also enabled the company to leverage corporate internal knowledge as most of the content they carried came from the internal content experts.

IBM's cost savings through e-learning

Program	Saving in 2000 (in US $million)
Basic Blue	16.0
Going global	0.6
Coaching simulators	0.8
Manager Quick-Views	6.6
Customer-Room	0.5
Sales Compass	21.0

The e-learning projects of IBM had been successful right from the initial stages of their implementation. These programs were appreciated by HR experts of IBM, and other companies. The Basic Blue program bagged three awards of 'Excellence in Practice' from the American Society for Training & Development (ASTD) in March 2000. It was also included among the ten best 'world-class implementations of corporate learning' initiatives by the "e-learning across the Enterprise: The Benchmarking Study of Best Practices" (Brandon Hall) in September 2000.

IBM continued its efforts to improve the visual information in all its e-learning programs to make them more effective. The company also encouraged its other employees to attend these e-learning programs. Apart from this, IBM planned to update these programs on a continuous basis, using feedback from its new and experienced managers, its sales force and other employees.

IBM used e-learning not only to train its employees, but also in other HR activities. In November 2001, IBM employees received the benefits enrollment material online. The employees could learn about the merits of various benefits and the criteria for availing these benefits, such as cost, coverage, customer service or performance using an Intranet tool called 'Path Finder.' This tool

also enabled the employees to know about the various health plans offered by IBM. Besides, Pathfinder took information from the employees and returned a preferred plan with ranks and graphs. This application enabled employees to see and manage their benefits, deductions in their salaries, career changes and more. This obviously, increased employee satisfaction. The company also automated its hiring process. The new tool on the company's intranet was capable of carrying out most of the employee hiring processes. Initially, IBM used to take ten days to find a temporary engineer or consultant. Now, the company was able to find such an employee in three days.

IBM also started exploring the evolving area of 'mobile learning'. Analysts felt that for mobile sales force of IBM, m-learning was the next ideal step (after e-learning). IBM leveraged many new communication channels for offering its courses to employees. IBM also started offering the courses to its customers and to the general public. In early 2002, American Airlines (AA) used IBM's e-learning package, which enabled its flight attendants to log on to AA's website and complete the 'safety and security training' from any place, at any time. The content included instruction clips, graphics, flash animation, and so on. This made the airlines annual safety training certification program guides more effective. Shanta Hudson-Fields, AA's manager for line training and special projects, commented, "The full service package that IBM offers has allowed us to develop an effective online course for our large group of busy attendants. In addition to providing a flexible training certification experience for our attendants, American has also brought efficiency and cost savings to our training processes using IBM's e-learning solution." The company had trained 24,000 flight attendants by November 2002.

Source: *Scribd.com*

2.5 KNOWLEDGE MANAGEMENT AS MANAGEMENT OF PEOPLE OR KNOWLEDGE WORKERS

Of the three components of knowledge management – people, processes and technology – the most important is undoubtedly people. Why? Because creating, sharing and using knowledge is something that is done by people. Processes and technology can help to enable and facilitate knowledge management, but at the end of the day it is people who either do it or don't do it. A number of organisations have learned this through bitter experience. Of those companies that led the way in the early days of knowledge management, many focused primarily on processes and technology – to their cost. Having made significant investments in the latest systems, they then found that people simply did not use them and so the systems ended up being confined to what became known as "the". Since then, organisations have learned that it is people who "make or break" knowledge management initiatives.

Check Your Progress

1. What do you mean by knowledge management?
2. Define operational process.
3. What is a discrete KM activity?

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There is a traditional view that knowledge sharing is not a natural act and that people need to be coerced or cajoled into it. In fact why not take a few moments right now to think about some of the values, attitudes and behaviours in your organisation that constitute barriers to seeking, sharing and using knowledge? For example:

- "Knowledge is power"
- "I don't have time"
- "I've got too much real work to do"
- "That's not my job"
- "You're just using other people's ideas and taking the credit"
- "I want to do things my way"
- "This is how it's always been done"
- "I'd like to help, but my manager won't like it if I waste time doing things for another team"
- "That's not how we do things around here"
- "I don't trust them"
- "Are you telling me how to do my job?"
- "I'm already suffering from information overload"
- "We're not allowed to make mistakes, let alone admit to them, share them or learn from them"
- "Don't bother others by asking them for help, work it out for yourself"
- "You should already know all the answers"
- "It's just another management fad; if I ignore it, it'll eventually go away"
- "What's in it for me?"
- "No"

These are just a few. However, it may surprise you to learn that there is also a view that knowledge sharing is in fact a very natural act and that we are already doing it all the time. If you take a few moments to watch people both at work and at play, you can see the evidence daily: in corridors, by the coffee machine, on the phone, by e-mail, at the pub, etc. – people are freely sharing knowledge all the time. Similarly, knowledge management consultants have reported that in their experience of working with a range of organisations, people want to share. They want to make a valuable contribution to their organisations, they like to see their knowledge being used, they want to help their colleagues, and they want to learn from others who they trust and respect.

So why does the "people" aspect of knowledge management tend to be such a challenge for most organisations?

Because our organisational cultures get in the way, they give rise to, and reinforce, behaviours that inhibit knowledge sharing. Most of us in the Western world have been trained to believe in individual effort and competition, and this from an earlier age than you might realise – remember at school how knowledge sharing

was called cheating? Since then, our working environments have largely perpetuated this way of thinking. We compete for jobs, salaries, promotions, recognition, status, power, budgets and resources, always believing that if someone else has something then there's less of it left for us. Put simply, we have been trained not to share.

Awareness of this is the first step to overcoming it. It is important to understand that we all carry this kind of programming and we all need to take responsibility for unlearning it and rethinking our old philosophies. Contrary to popular belief, experience is increasingly showing that people are generally willing to share, but they need a supportive, encouraging and safe environment in which to do so. Sadly, most organisational cultures have some way to go before they can claim to provide such an environment.

2.6 KNOWLEDGE MANAGEMENT AS TRANSFORMING INDIVIDUAL KNOWLEDGE INTO ORGANISATIONAL KNOWLEDGE

If knowledge management is new to an organisation, it requires changes in individual behaviour. Individuals must be encouraged to incorporate knowledge management activities into their daily routines. This includes activities relating to seeking out knowledge when they have questions or problems, finding and using existing knowledge rather than reinventing the wheel, sharing their own knowledge, learning from others' experience and helping others to learn from theirs.

While people's behaviours are largely a function of the organisational culture, they are easier to see and to identify as "makers or breakers" – enablers or barriers – to knowledge sharing. This is best approached from the context of your current objectives, issues and the day-to-day work of your employees. By changing the way people behave and by showing them new ways of working that can make their jobs easier and more successful, you can not only change their behaviour, but also affect the underlying cultural assumptions that drive people's behaviour in the first place. In other words, people learn best by doing, rather than being told.

Of course for individual behaviours to change in a sustained way, there needs to be a conducive organisational culture, which brings us back to the earlier point that the two are inextricably linked.

Assuming that people will generally share knowledge if the barriers and disincentives to doing so are removed, then you can seek to bring about lasting changes in both individual behaviours and organisational culture by:

- Focusing on changing individual behaviours first
- Understanding the barriers to knowledge sharing and seeking to eliminate them
- Introducing policies and practices that enable and encourage knowledge sharing

- Understanding your organisational culture and working within it rather than against it while gradually working to change it.

A number of researchers such as Weick (1978) and Simon (1976) believed that organizations did not have learning capabilities. It is rather individuals in organizations that learn. However, a number of researchers like Starbuck (1983) and Nelson and Winter (1982) propose that organizations evolve through their learning capabilities. Organizations learn and acquire knowledge through their routines and repertoires, which are embedded in specific organizational histories (Nelson and Winter, 1982). The way in which knowledge of diverse repertoires or routines is integrated and new knowledge is created is shaped by organizational history and culture (Barney, 1986). In this perspective, an organization is referred as a problem-facing and problem-solving entity. The learning that takes place in an organization is significantly affected by the complexity of tasks and the organizational environment. We argue that individual knowledge and organizational knowledge are distinct yet interdependent. The extent to which each individual interacts with the other depends on the organizational culture (Bhatt, 1998). We take this view because in the present environment, individuals in the organizations need to make many quick decisions to resolve customers' problems. Instead of using rules and regulations as directed from the hierarchy, employees are forced to make many judgments to solve business problems efficiently (Stalk, 1988).

On the other hand, in complex situations, where organizational tasks are highly interdependent and individuals do not possess necessary levels of expertise to solve interdisciplinary problems, employees are required to collaborate with others to share their knowledge and expertise. By agreeing on common presumptions and analytical frameworks, employees can coordinate diverse sets of activities and solve organization-wide complex problems. Many of these kinds of tasks are confronted by professional firms, where each individual possesses expertise in a specific area, because of his/her educational background and work practice. As long as individuals in professional firms confront tasks that are within their areas of expertise, they can easily execute these tasks without requiring interactions with others. However, when the nature of tasks is complex, requiring integration of expertise from several interdisciplinary areas, individuals need high levels of interaction with others, besides being able to access organizational knowledge.

Although an organization can use individual expertise in seeking the solutions of organization-wide problems, it cannot claim its right on an individual's knowledge. On the contrary, the organization itself becomes vulnerable to the mobility and idiosyncrasies of experts. Therefore, even after employing a number of experts, the organization may still not gain its full potential in solving organization-wide complex problems. Sharing of knowledge for solving a complex problem is not synonymous with the decomposition of knowledge activities. What kind of knowledge is shared and how knowledge will be shared are determined by the professionals, not by the management. Moreover, unlike production-based activities, where almost all

the specifications and breakdown of activities are predefined in detail, knowledge activities are often unstructured and their specifications cannot be predefined in detail. The outcome of knowledge-intensive activities is uncertain. The success, however, often brings innovation and improvements. Therefore, knowledge sharing is a choice that is selected and used differently by different professionals.

Unlike formal breakdown of work-structures as dictated by management, knowledge sharing is an informal and social process. In other words, how professionals process and share knowledge becomes an expression of their personal expertise, experience, and creativity. Based on their expertise and experience, knowledge professionals decide with whom to interact, how to interact, and what knowledge to seek. Cappelli (2000, p. 104) argues convincingly in the following words: The open competition for other companies' people, once a rarity in business, is now an accepted fact. Executives know that fast-moving markets require fast-moving organizations that are continually refreshed with new talent. He further adds: Today when an oil company wants to expand the sales of products at its service stations, it hires managers from Pepsi and Frito-Lay with expertise in retailing. When an airline wants to get better at managing customer relationships, it recruits executives from Marriott with experience in customer service (Cappelli, 2000, p. 105). The above scenarios emphasize the importance of individual expertise.

2.7 KNOWLEDGE MANAGEMENT AS MANAGING FOR NEW KNOWLEDGE

Most knowledge management strategies generally have one (or sometimes both) of two thrusts. The first is to make better use of the knowledge that already exists within the organisation, and the second is to create new knowledge.

Making better use of the knowledge that already exists within an organisation ("old" knowledge) often begins with "knowing what you know". Very often leading managers comment: "if only we knew what we knew". Too frequently, people in one part of the organisation reinvent the wheel or fail to solve a problem because the knowledge they need is elsewhere in the organisation but not known or accessible to them. Hence, the first knowledge management initiative of many companies is that of finding out what they know, and taking steps to make that knowledge accessible throughout the organisation. Specific approaches might include conducting a knowledge audit, mapping the organisation's knowledge resources and flows, making tacit knowledge more explicit and putting in place mechanisms to move it more rapidly to where it is needed.

Creating new knowledge can equally be approached in a number of ways such as through training, hiring external resources, bringing different people and their knowledge together to create fresh knowledge and insights, etc. It is also about innovation – making the transition from ideas to action more effective. Many managers mistakenly believe this is about R&D and creativity. In fact there is no

shortage of creativity in organisations – not just in R&D but everywhere. The real challenge is not to lose these creative ideas and to allow them to flow where they can be used.

In reality, the distinction between "old" and "new" knowledge is not always that clear. Innovation will often draw on lessons from the past, particularly those that have been forgotten, or those that can be put together in new combinations to achieve new results. Similarly, the application of (old) knowledge almost always involves some adaptation, and so in the process of adaptation, new knowledge is created. At the end of the day, the quality of knowledge does not depend on whether it is "old" or "new" but rather whether it is relevant. Whether it is old or new hardly matters.

2.8 KNOWLEDGE DIMENSIONS

The following are the key dimensions of knowledge:

2.8.1 Tacit Knowledge

Tacit knowledge can be defined as the knowledge of a person that s/he gathers by virtue of his/her understanding, experience, experimentation, observation, etc. and utilizes it according to the need in some case, but in certain cases, fails to express it in words or other means whereby it can be passed on to others. It is believed to be the expertise a professional has developed. In many cases, s/he can orally explain it and if necessary write it down. For example, an experienced classifier can lucidly explain the rule of classification, and write it down. He/she will be able to classify a book. On the other hand, an inexperienced classifier will, initially, take time for the job, and s/he will gradually pick up the speed. For example, a tea taster tastes tea and grades six cups of tea as excellent, very good, good, fair, bad and worst, according to its quality. Now, it will be very difficult for the taster to explain or write down how s/he has decided the quality of tea into six grades. This is also tacit knowledge, but inexpressible. Another example, Sachin Tendulkar has been scoring centuries after centuries in one-day matches and test-matches. Other batsmen are clearly seeing how Tendulkar is batting. Still, they fail to score so many centuries as Tendulkar does. Tendulkar has developed this capability by years of experience, but he will not be able to pass on this knowledge to others whereby they can also do exactly the same.

Tacit knowledge has certain characteristics which, among others, are as follows.

- It is personal and usually resides at the subconscious state within the brain;
- It defies detection by observation;
- It is gained through experience, understanding, insights, sound judgments, and so on;
- In most cases it is not recorded;
- It is not available in open source;

- In certain cases it is difficult to express in words or by any other means;
- Inexpressible tacit knowledge cannot be translated from one language to the other.

Undeniably, the tacit knowledge of the employees is an asset to an organization and its proper utilization and nurturing is a good example of knowledge management. Moreover, the case descriptions of highly successful projects usually include: a statement of the problem, the circumstances of the case, the steps followed by the expert in finding the solutions to the problem, the specification of useful data and information relevant to the exercise, and the outcome. This forms the firm base for the establishment of the set of best practices which often serve as a benchmark for comparing the quality expected of practising experts (Blair, 2002). Building a collection of 'good practices' is often considered an important component of knowledge management.

2.8.2 Explicit Knowledge

Explicit knowledge may be defined as the knowledge that has been expressed and in most cases recorded. The recording may be in print form, written form, pictorial form, tabular form, audio form, video form, digital form or any other form. Everyday newspapers, radios, TVs are disseminating explicit knowledge. While teachers are teaching in the class, doctors are prescribing medicines, political leaders are delivering speeches; in all the cases they are using explicit knowledge. Whatever has been recorded in the aforesaid forms is in fact information. If a person can comprehend that information then s/he becomes knowledgeable about it.

It is to be noted that information will become knowledge only when it is comprehended. A large number of seals discovered in Mahenjodaro contain huge amount of information. Today, information recorded in many of the seals has not been understood, hence we do not have any knowledge embedded in those seals.

Like tacit knowledge, explicit knowledge also has a number of characteristics. Some of them are listed below.

- It is expressed and can be recorded in diverse media (paper, tape, computer memory, etc.) and stored.
- It is explained whereby comprehending the matter becomes easy.
- It can be seen if written, printed or typed; heard if recorded in tapes, CDs, etc.
- It can be shared.
- It can be translated from one language to the other.
- Generally, it is available as open source of knowledge.

2.8.3 New Knowledge

Creating new knowledge can equally be approached in a number of ways such as through training, hiring external resources, bringing different people and their

knowledge together to create fresh knowledge and insights, etc. It is also about innovation – making the transition from ideas to action more effective. Many managers mistakenly believe this is about R&D and creativity. In fact there is no shortage of creativity in organisations – not just in R&D but everywhere. The real challenge is not to lose these creative ideas and to allow them to flow where they can be used.

2.9 KNOWLEDGE SPIRAL MODEL OF NONAKA & TAKEUCHI

Modelling knowledge management is one big issue for those who are in charge of gathering information, documents, professional experiences and know-how at a corporate level.

Nonaka's and Takeuchi's relevant work should allow you to understand easily and clearly how knowledge may be dealt with, transforming tacit knowledge into more explicit forms. "The Nonaka and Takeuchi KM model focuses on knowledge spirals that explains the transformation of tacit knowledge into explicit knowledge and then back again as the basis for individual, group, and organizational innovation and learning." (K. Dalkir)

This field Nonaka and Takeuchi (1995) spiral model illustrates how knowledge is created and transferred in an organisation through interactions between tacit and explicit knowledge. More specifically they recognise these interactions as 'knowledge conversion'. There are four modes of knowledge conversion, namely, socialisation, externalisation, combination and internalisation (see Figure 2.2) as summarised in the following:

- Socialisation (from tacit to tacit): where knowledge transfer takes place in a tacit form. Here, an individual acquires tacit knowledge directly from others through shared experience, observation, imitation and so on.
- Externalisation prompted by meaningful dialogues or reflections.
- Combination (from explicit to explicit): through a systematisation of concepts drawing on different bodies of explicit knowledge present in the environment of an organisation.
- Internalisation (from explicit to tacit): through a process of "learning by doing" and through a verbalisation and documentation of experiences. The main benefit of this model is that it provides a mechanism to provide an understanding on the epistemology and dynamism of knowledge itself, and provides a framework for management of the relevant knowledge management processes from the ontological perspective. We will use this framework to discuss how knowledge is shared and generated and learning take place in a virtual CoP.

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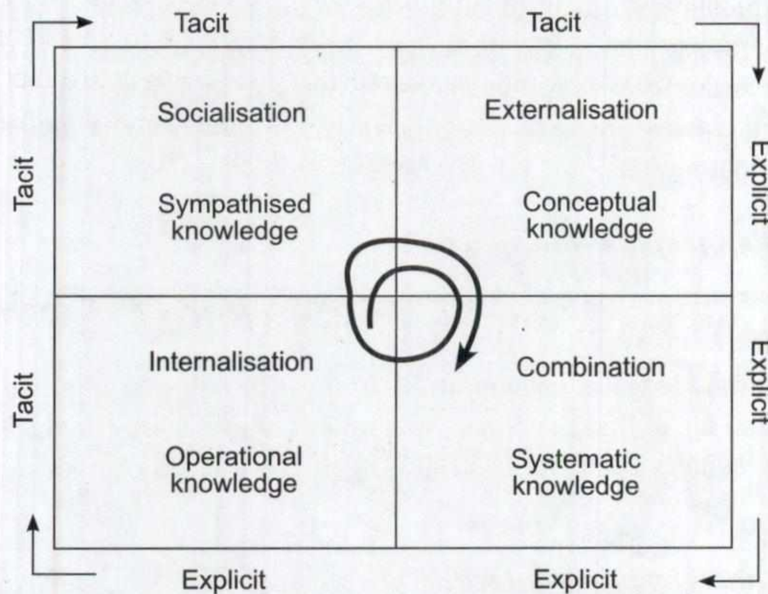


Fig. 2.2: SECI diagram representing four modes of knowledge conversions *(Source: Nonaka and Takeuchi, 1995).*

1. Socialization (tacit-to-tacit)

Much knowledge, perhaps 80%, lies in people's brains. The aim for the knowledge worker is to find ways to collect this tacit knowledge. Socialization consists of sharing knowledge through social interactions.

People hold indeed know-hows, secrets, personal skills that will never be shared if none work on it. It is very important to try to gather this knowledge by socializing, that is, using face-to-face communication or better, share experience directly at work through 2 roles: the tutor and the apprentice. It involves arriving at a mutual understanding through the sharing of mental models.That way, there will be little risk that the know-how of your company leaves at the same time of employees' retirement.

Socialization is a very effective means of knowledge creation, maybe one of the easiest but nethertheless the more limited. It is also very difficult and time-consuming to disseminate all knowledge using this mode only.

2. Externalization (tacit-to-explicit)

The process of externalization (tacit-to-explicit) gives a visible form to tacit knowledge and converts it to explicit knowledge. It can be defined as "a quintessential knowledge creation process in that tacit knowledge becomes explicit, taking the shapes of metaphors, analogies, concepts, hypotheses, or models" (Nonaka and Takeuchi, 1995). In this mode, individuals are able to articulate the knowledge and know-how and, in some cases, the know-why and the care-why.

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An intermediary is often needed to execute this process. For instance, we can consider a journalist who is the typical person able to interview knowledgeable individuals in order to extract, model, and synthesize in a different way (format, length, ...) and thereby increase its scope (a larger audience can understand and apply this content now).

3. Combination (explicit-to-explicit)

Combination is the process of recombining discrete pieces of explicit knowledge into a new form.

No new knowledge is created at this step. It is rather to improve what we have gathered so far, to make synthesis or a review report, a brief analysis or a new database. The content has been basically organized logically to get more sense, consolidated.

4. Internalization (explicit-to-tacit)

The last conversion process, internalization, occurs through diffusing and embedding newly acquired and consolidated knowledge. In some way, internalization is strongly linked to "learning by doing".

Internalization converts or integrates shared and/or individual experiences and knowledge into individual mental models. Once internalized, new knowledge is then used by employees who broaden it, extend it, and reframe it within their own existing tacit knowledge.

Case study: Knowledge management at Slaughter & May

Law firm Slaughter & May has selected information management provider Recommind's knowledge management search solution to replace its "flaky" Hummingbird document and knowledge management platform.

The firm had been using information management vendor Hummingbird's platform for at least eight years but found that it was no longer meeting the needs of its lawyers as it was not enabling them to efficiently find the information they needed.

The company's project leader, Helen Geoghegan, told computing that this was because the platform had become heavily customised.

"We had customised the platform so heavily that the actual application that we have in place doesn't resemble the underlying product, so any future development would have been extensive and more drawn out," she said.

Slaughter & May's (S&M) head of technology, Christopher Martin, added that the tool was not performing to the standards that the law firm expected.

"It wasn't a browser-based system. It wasn't at the level we wanted, was flaky and we weren't clear where the product was going. Depending on what

you were searching for you had to search for completely different material, so different taxonomies for different sorts of items, which made it hard to use," he told Computing.

The firm went to the market to look for alternatives in early 2010 after identifying the key requirements.

Martin said that S&M consulted other law firms who had also switched to Recommind's system.

"We talked to other law firms and took references from them because it just underwrote the confidence that we've got from our experience, that Recommind was able to solve these specific problems that we had," Martin said.

Some of the other law firms using the technology include Clifford Chance, Eversheds, Macfarlanes and Stephenson Harwood.

The firm then sent out a tender and eventually selected two options before deciding on Recommind in September 2010. Martin put this down to the firm's ability to understand what S&M was trying to achieve in the given time-frame.

After implementing Windows 7 with IE8, S&M then went through development and configuration work on the Recommind system followed by a pilot in early 2011.

According to Martin, the solution was launched on schedule and on budget in November 2011.

Challenges

Martin explained that there were several challenges for the firm in ensuring that the installation of Recommind's solution went smoothly.

"First, we decided that we needed to wait for the introduction of IE8. At the time we were still using IE6 and in order to get full functionality [from the solution] we were waiting for Windows 7," he said.

To migrate the data out of the Hummingbird platform, S&M built a new database using Autonomy software.

A third challenge was implementing changes to the solution by taking on board user comments; this included a lot of fine-tuning to the appearance of the user interface.

Benefits

Martin claimed that the system is easier and quicker to use than Hummingbird's platform, resulting in lawyers finding the items they want more frequently and quickly. This has also resulted in people adding more content to the system.

"The system has been received well, lawyers find it easier to work with, less hassle to get the information they want. The platform technically is solid and it does what it's meant to do," Martin said.

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Check Your Progress

Fill in the Blanks

4. .... can be defined as the knowledge of a person that s/he gathers by virtue of his/her understanding, experience, experimentation, observation, etc. and utilizes it according to the need in some case, but in certain cases, fails to express it in words or other means whereby it can be passed on to others.
5. ... ... may be defined as the knowledge that has been expressed and in most cases recorded.
6. "The Nonaka and Takeuchi KM model focuses on knowledge spirals that explain the transformation of tacit knowledge into .... and then back again as the basis for individual, group, and organizational innovation and learning."
7. .... consists of sharing knowledge through social interactions.

One of the system's main strengths is that it does not require a lot of training to use, said Martin.

"We wanted it to be intuitive so people can use the system with minimal guidance, and we saw that as a result of releasing the software that it was exactly what we wanted; 15-minute training sessions tailored depending on the employee," Martin said.

The solution is designed primarily for use by the firm's 700 lawyers in London and Brussels, but all staff can access it via the organisation's intranet.

In the future, Martin said that along with being able to search the personal intranet, users will be able to search the firm's secure intranet using the tool.

"We are also going to be plugging in other data sources in addition to our database and our intranet. For example we will be plugging into our library of physical books," Martin said.

Source: *http://www.computing.co.uk/ctg/news/2224434/case-study-knowledge-management-at-slaughter-may/page/2*

2.10 SUMMARY

- Knowledge management is the concept of taking data and turning it into useful and applicable knowledge in a business environment.
- Here is a three-tier framework of business processes and outcomes distinguishing operational business processes, knowledge processes, and processes for managing knowledge processes.
- Knowledge management is the set of processes that seeks to change the organization's present pattern of knowledge processing to enhance both it and its outcomes. A discrete knowledge management activity is one that has the same goal as above or that is meant to contribute to that set of processes.
- As knowledge management became the latest buzzword, technology vendors were quick to spot an opportunity to sell "knowledge management solutions" and many of the companies that led the way in knowledge management were quick to buy – to their cost.
- Most knowledge management strategies generally have one (or sometimes both) of two thrusts. The first is to make better use of the knowledge that already exists within the organisation, and the second is to create new knowledge.
- Tacit knowledge can be defined as the knowledge of a person that s/he gathers by virtue of his/her understanding, experience, experimentation, observation, etc. and utilizes it according to the need in some case, but in certain cases, fails to express it in words or other means whereby it can be passed on to others.
- Explicit knowledge may be defined as the knowledge that has been expressed and in most cases recorded.

2.11 KEY TERMS

- **Knowledge Management:** Knowledge management is the set of processes that seek to change the organization's present pattern of knowledge processing to enhance both it and its outcomes.
- **Tacit knowledge:** Tacit knowledge can be defined as the knowledge of a person that s/he gathers by virtue of his/her understanding, experience, experimentation, observation, etc. and utilizes it according to the need in some case, but in certain cases, fails to express it in words or other means whereby it can be passed on to others.
- **Explicit knowledge:** Explicit knowledge may be defined as the knowledge that has been expressed and in most cases recorded.
- **Combination:** Combination is the process of recombining discrete pieces of explicit knowledge into a new form.

2.12 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Knowledge management is the concept of taking data and turning it into useful and applicable knowledge in a business environment.
2. Operational processes are those that use knowledge but, apart from routinely produced knowledge about specific events and conditions, don't produce or integrate it. Examples of outcomes are Sales Revenue, Market Share, Customer Retention and Environmental Compliance.
3. A discrete knowledge management activity is one that has the same goal as above or that is meant to contribute to that set of processes.
4. Tacit knowledge
5. Explicit knowledge
6. Explicit knowledge
7. Socialization

2.13 QUESTIONS AND EXERCISES

Short Answer Questions

1. Define knowledge management.
2. Define tacit knowledge.
3. What are the key characteristics of tacit knowledge?

4. What are the key characteristics of explicit knowledge?
5. What are the key steps included in knowledge management process?

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Long Answer Questions

1. Discuss the process of knowledge management.
2. Write a detailed note on KM as a business process.
3. Discuss the 3-tier conceptualization of KM.
4. Discuss KM as management of information and knowledge workers.
5. What are the key knowledge dimensions?
6. Discuss the Knowledge Spiral Model of Nonaka & Takeuchi.

UNIT 3 STRATEGIES FOR KNOWLEDGE MANAGEMENT

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Structure

3.0 INTRODUCTION

Knowledge is a dynamic combination of experience, expert insight, values and contextual information. It can be intangible, personal, elusive, and immeasurable (Gorelick, 2005). Knowledge constitutes a foundation for evaluating new experiences and information and is continually shaped through new experiences (Davenport & Prusak, 1998). Knowledge has two very distinct aspects; the easily communicated and recorded or explicit knowledge and tacit knowledge which is embedded in the minds of individuals and is not so easily documented (Nanoka & Takeuchi, 1995).

A good knowledge management strategy is closely aligned with the organisation's overall strategy and objectives. In choosing the best knowledge management strategy, an enterprise must take into account the available resources,

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including the software and human resources that can be dedicated full-time to a knowledge management function. The corporate culture also should be assessed and the enterprise should consider whether changes are required in that culture. The objectives of the enterprise and the mission statement are other factors in determining the knowledge management strategy. The best strategy to follow also depends on the business model, the industry in which the enterprise operates and the nature of the customers and suppliers of the business.

The choice of the best knowledge management strategy may be adapted to take into account the goals of the organization and the resources available to implement the strategy. An enterprise with an innovation culture requiring support from knowledge management should gear the strategy to promoting the sharing of innovative ideas within the enterprise and links with relevant external research establishments or collaborative networks. An enterprise devoted to customer service should link the knowledge management strategy to customer feedback, collaborative online spaces, open innovation and involvement of customers in product development. The strategy should be geared to available resources in terms of the software to be used and the number of staff members who can be involved in knowledge management.

The existing corporate culture is an important factor. If the culture is for employees to participate in decisions and be proactive with suggestions for improvement and innovation, then the knowledge management strategy may be geared to improving the channels for communication between management and staff. The strategy could aim to increase staff collaboration and ensure that staff suggestions are considered and, where appropriate, acted on. Where the corporate culture is centered on customer service, the knowledge management strategy could focus on improvement of the channels of communication and collaboration with customers.

Where sufficient resources are available, the knowledge management strategy could be directed toward changing the corporate culture to encourage a more innovative or customer-oriented approach within the organization. The strategy could involve establishing channels for staff suggestions, involving collaborative sites and incentives for serious participation such as monthly non-cash prizes for the best proposals. Regular meetings could be held for discussion of methods for promoting innovation or improved customer service. A formal process could be instituted to ensure that all staff suggestions are followed up and, if necessary, improved by further discussion with relevant staff. The knowledge management strategy could thereby ensure that as many staff suggestions as possible are translated into action by management.

3.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Identify the KM strategies

- State the key motivations for KM
- Describe KM system.

3.2 DEVELOPING KNOWLEDGE MANAGEMENT STRATEGIES

A knowledge management strategy is simply a plan that describes how an organisation will manage its knowledge better for the benefit of that organisation and its stakeholders. The strategic plan is based around the vision and the mission of an organisation. Different approaches to KM are not mutually exclusive and no one approach is instinctively preferable to another (Newell et al 2002). A universal view of KM implies that there is one single best approach to the management of knowledge which can be applied to all contexts, under all circumstances (Becerra-Fernandez et al 2004).In contrast to the universalistic view of KM, the contingency view recognises multiple alternative paths (Becerra-Fernandez et al 2004, Newell et al 2002). It recognises the need for flexibility, dependent on the process applied to achieve a given goal and stresses that the appropriateness of a KM approach will depend on the business context and the available resources (Newell et al 2002).

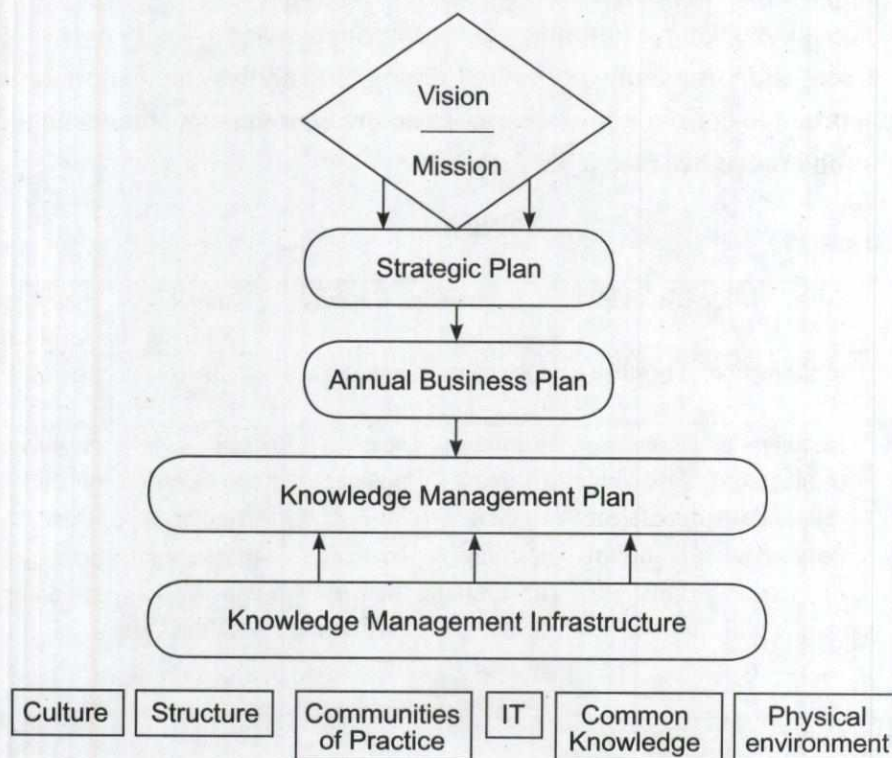


Fig. 3.1: Framework of KM Strategies

Developing a knowledge strategy for a given organisation should begin with revisiting the organisation's vision and mission and the associated strategic and business plans (Salisbury, 2003). These should form the basis of a "roadmap" for

the establishment of a knowledge management strategy (see Figure 3.1 above). The business plans are formulated around the strategic vision can be seen as a 'roadmap' for the Knowledge Management Plan. Knowledge infrastructure components provide the launching platform for the organisation's Knowledge Management Plan. The value of utilising these intrinsic business resources lies in the fact that they identify what the organisation plans to achieve in the long-term, which is not necessarily the same as what the organisation is currently doing. A systematic knowledge management strategy is implemented to support the organisation's long-term business strategy (Salisbury, 2003). The business strategy of the organisation will also help to identify the performance gap between the current workflow and the optimal workflow required to achieve strategic objectives.

Knowledge Management Infrastructure

Introducing a KM strategy to the organisation will require setting up a solid KM infrastructure on which the strategy can be launched. The components of this infrastructure include: organizational culture, structure, communities of practice, information technology (IT) infrastructure, common knowledge and physical environment (Becerra-Fernandez et al 2004). KM infrastructure components are interdependent on each other in a complex web of interrelations. These interrelations need to be considered when examining each component as it currently exists within the organisation, and formulating policy and strategies to address their shortcomings. It is also important to consider how the infrastructure components are related to KM mechanisms and processes (see table 3.1).

Table 3.1

KM Processes	**Knowledge Discovery**		**Knowledge Capture**		**Knowledge Sharing**	**Knowledge Application**
KM Mechanisms	Combination	Socialization	Internalization	Externalization	Exchange	Routines
	meetings collaborative creation of documents	transfer b/w units conferences brainstorming	learning by doing training learning by observation face-to-face meetings	best practices lessons learned models monitoring and evaluation	team collaboration manuals presentations expert location DBs	organizational policies work practices standards
KM Infrastructure	Culture	Structure	IT	Common Knowledge	Physical Environment	

KM processes, associated mechanism and KM infrastructure. Recognising the role of KM infrastructure interrelations and establishing and supporting each

element will form a strong foundation of any KM strategy. Important to note is that KM processes are not isolated and can overlap with each other or occur at the same time (adopted from Becerra-Fernandez et al 2004).

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Organisational Culture

Organisational culture embodies the norms and beliefs that guide the behaviour of the organisations members and is an important enabler of KM in an organisation. Creating and supporting a culture helps motivate employees to understand the benefits of KM at all levels of the organisation and encourages knowledge sharing (Becerra-Fernandez et al 2004). People and the way they are managed are at the centre of the knowledge-based working process (Ellis, 2005). A culture of support plays a vital role in employee satisfaction and ongoing success of KM strategy. The importance of employee commitment to the organisation stresses the importance of the need for a deeper form of attachment which leads to knowledge sharing. Individual commitment is linked to motivation, dedication and involvement in organisational processes (Ellis, 2005).Consequently, strategies and policies aimed at establishing and supporting a culture conducive to effective KM centre around human resource management. Drucker (1993) recognised that human capital is the most important resource which distinguishes one organisation from another. Rewards and incentives which promote employee interaction will encourage knowledge sharing and creation. However, focus on individual performance and knowledge hoarding with limited employee interaction together with lack of top management involvement will inhibit knowledge sharing (Becerra-Fernandez et al 2004). Direct mechanisms aimed at establishing a culture of knowledge sharing and learning include: regular organisational seminars, across business unit brainstorming sessions, tutorials lead by organisational experts (Suresh & Mahesh, 2006). The University of New South Wales promotes learning and development by hosting regular seminars and workshops aimed at providing an avenue for staff from various departments to share experiences and knowledge. These seminars usually centre around a formal agenda with informal opportunities to 'mix and mingle' with colleagues during plenary sessions.

Organisational Structure

Organisational structure characterised by a strong hierarchy can dictate and limit interaction and set barriers for knowledge transfer, especially between leadership, management and business units within an organisation (Becerra-Fernandez et al 2004). It can also promote knowledge hoarding as individuals realise the personal benefit they can draw from withholding knowledge. A de-centralised, flatter structure with limited layers places more responsibility on each individual. It allows for emphasis to be placed on leadership promotion and not top-down management (Becerra-Fernandez et al 2004). Good leadership can promote creativity, increase individual motivation and lead to innovation. Organisational structure is closely linked to the culture of an organisation. Strong hierarchies where knowledge hoarding

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is seen as vital to moving up in the organisation will promote dis-empowerment and dissatisfaction resulting in decreased motivation, efficiency and productivity. This can result in the loss of staff and consequent loss of knowledge. Make-up of an organisation is important in determining the ideal structure and placement of employee within an organisation. Determining the knowledge transfer needs will uncover the makeup of the organisation in terms of novices, practitioners and experts. The resultant high number of novices in the organisation will require greater support and increased emphasis will also need to be placed on leveraging the expertise of long term staff (Becerra-Fernandez et al 2004).

Communities of Practise

Organisational structure that allows development of communities of practice will encourage knowledge sharing. Communities of practice are organic, self organised groups of individuals, who are dispersed, but communicate regularly to discuss issues of mutual interest (Becerra-Fernandez et al 2004). Knowledge sharing within communities of practice can be achieved in a number of ways. Knowledge can be leveraged by developing existing communities in a natural informal way. Formalising communities of knowledge can reduce the groups to repeating the official "company line", abandon natural curiosity and energy which people share Empowering communities of practice to decide what and how to share with the rest of the organisation allows for the communities to feel ownership of their knowledge which helps to facilitate its organisation and maintenance (Ahmed et al 2002).The success of communities of practice in sharing knowledge across an organisation will be largely dependent on a supportive and encouraging culture, as well as an organisational structure which promotes open, trust based communication between all members irrespective of status. Support in the form of resources, time and effort will ensure long-term survival of communities of practice (Ahmed el al 2002).It is important to link and integrate communities of practice into the work-flow of the organisation. Recognising that social discourse plays an important role alongside problem-solving in achieving work objectives, will allow for a blend of the informal and formal aspects of work (Ahmed et al 2002).

IT Infrastructure

IT infrastructure should be developed to support the organisations information systems such as data storage and processing (Becerra-Fernandez et al 2004). IT plays a vital role in capturing and sharing explicit knowledge of an organisation by providing shared common access to information such as; procedural manuals, client and organisational contact databases. IT infrastructure should aim to promote communication especially between parts of the organisation that are physically separated from each other (Becerra-Fernandez et al 2004). The type and extent of IT support in an organisation will be dependent on the size and type of organisation. Small organisations with business units which are not separated physically will have much less of a need for IT communication support and will need to focus more on

storage and processing of data. The role of IT infrastructure will also be dictated by the type of relationship an organisation has with its clients. A small community organisation which provides one of face-to-face advice will not rely as heavily on IT systems to capture information as a telephone based marketing organisation. Technology should however be seen as an aid, not the outcome of KM (Lim & Klobas, 2000)

Common Knowledge

Common knowledge formed through cumulative experiences provides unity, a shared language and norms to members of an organisation. Common knowledge adds the value of individual expert knowledge by placing it within the context of the knowledge of others in the organisation (Becerra-Fernandez et al 2004). Common knowledge of a given organisation is endemic to it and resists transfer or leakage to other organisation. As such common knowledge support knowledge transfer in the organisations it belongs to (Becerra-Fernandez et al 2004). Recognising and facilitating transfer of common knowledge is facilitated through organisational routines and informal ways of "doing things" which are unconsciously understood by members of the organisation.

Physical Environment

The design of the physical environment from workplace office layout, provision of meeting rooms and spaces for informal knowledge sharing and transfer such as coffee rooms is a vital component which can facilitate human interaction and thus enable knowledge sharing and creation (Becerra-Fernandez et al 2004). Too often office design can group teams together and segregate them from other units of the organisation.

3.2.1 Benefits of Developing KM Strategies

A good, clear knowledge management strategy can help to:

- Increase awareness and understanding of knowledge management in your organisation
- Articulate the business case and identify potential benefits
- Gain senior management commitment
- Attract resources for implementation
- Communicate good knowledge management practice
- Give you a clear, communicable plan about where you are now, where you want to go, and how to plan to get there
- Give you a basis against which to measure your progress

3.2.2 Knowledge Management Strategy Implementation

Once a theoretical model for managing knowledge within a given organisation has been developed an implementation strategy needs to be put in place. The

implementation strategy will develop practical policies and guidelines. The final step in implementing the knowledge strategy and one which is vital in the overall success of the knowledge plan is the introduction and training of the members of the organisation and an ongoing support plan for the KM strategy (Salisbury, 2003). Training of members of the organisation will introduce the mechanics of the new system and promote acceptance at all levels of the organisation of the new way of working. The extent of the training will be directly linked to the level of organisational change brought about by the new system (Salisbury, 2003).The ongoing support plan should incorporate an evaluation framework. As the internal and external context shifts and changes, the KM strategy should be modular and flexible to allow for re-assessment of the needs and plans of the organisation and adjustment of current strategies and policies as well as the incorporation of new KM practices. This will allow for effective change management through the maintenance and application of protocols which focus on the knowledge needs of the organisation to carry out daily workflow.

3.2.3 Organisational Impacts of Knowledge Management

Successful KM can lead to a number of positive impacts within the organisation. As illustrated in the table below these impacts can be seen at various levels of the organisation. Additionally it is important to note that the impact KM has on one level might lead to a cumulative effect on a different level as well. Employee learning can lead to improved process effectiveness which in return can be directly linked to increased return of investment for the organisation (Becerra-Fernandez et al 2004). A successful KM strategy allows a firm to differentiate which assets to develop and which to abandon. It gives it the ability to combined knowledge assets with other resources needed to create value (Teece, 2000).

Table 3.2: Organisational Impact of Knowledge Management

Level of Impact	Aspect
People	employee learning
	employee adaptability
	increased number of connections increases the quality of shared information, job satisfaction
Processes	leveraging expertise of people across the organisation
	process effectiveness
	process efficiency
	consistency in good practices
	process innovation
Products/Services	value-added products or services, knowledge-based products/services

Performance	*direct impact*
	• return of investment
	indirect impact
	• economies of scale and scope
	• sustainable competitive advantage

Adopted from Becerra-Fernandez et al 2004

3.3 KNOWLEDGE MANAGEMENT STRATEGIES

There are three stages of gaining knowledge: before, during, or after KM-related activities. Different organizations have tried various knowledge capture incentives, including making content submission mandatory and incorporating rewards into performance measurement plans. Considerable controversy exists over whether incentives work or not in this field and no consensus has emerged. The following are the key knowledge management strategies:

3.3.1 Push (active) and Pull (ad hoc) Strategies

Given below is the push and pull concept of knowledge management:

Push Strategy

One strategy to KM involves actively managing knowledge (push strategy). In such an instance, individuals strive to explicitly encode their knowledge into a shared knowledge repository, such as a database, as well as retrieving knowledge they need that other individuals have provided to the repository. This is also commonly known as the codification approach to KM.

Pull Strategy

Another strategy to KM involves individuals making knowledge requests of experts associated with a particular subject on an ad hoc basis (pull strategy). In such an instance, expert individual(s) can provide their insights to the particular person or people needing this (Snowden 2002). This is also commonly known as the personalization approach to KM.

3.3.2 Cross-Project and Mapping Strategies

Cross-Project Strategies

Cross-project learning deals with knowledge transfer from one project to another. In many companies this type of transfer takes place in an informal way, but some companies establish formalized, standardized and conscious channels.

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Knowledge Mapping Strategies

Some companies are undertaking knowledge mapping projects that identify where knowledge is located in the organization and how to access it. Although there are varied approaches, the purpose of knowledge mapping is to guide people to knowledge resources within the company. Hughes Space & Communications is building a knowledge expressway using Lotus Notes, videoconferencing, employee home pages, and numerous other technologies. The map is used to transfer new management practices, track licenses and patents, gather competitive intelligence, and so forth. For example, the engineering group might tap into a "lesions learned" database using hypertext links to directories, abstracts, and other documents. Hughes also hopes to use knowledge mapping to support tacit knowledge sharing by guiding people to pockets of expertise and fostering communication and storytelling.

3.3.3 Competence Building and Collaborative Strategies

Competence Strategies

The core competence approach of strategy views the business in a particular way. For this approach business are open systems intermingling with their environments to obtain resources and deliver outputs. As per this approach of strategy, the capacity of the business to build up core competences that are not acquired by its competitors and that generate recognizable profits for consumers form the basis of its superior performance.

The business can create competitive advantage in both new and current markets as below:

- By leveraging the presently available core competences
- By building new competences
- Through alliance relationships with suppliers, customers and also competitors

The collective learning or knowledge of the organization forms the basis of its core competences. In recent time the study of core competences has concentrated more on knowledge as its main aspect. In an organizational perspective, principles, facts, skills, and rules which update the organizational decision-making, behaviour and actions are regarded as knowledge. The organization's activities, competences, products and services are founded on this knowledge. Also the capability of the organization to build up new knowledge, and thereby core competences, faster and more efficiently when compared to its competitors form the key for its competitive advantage.

Collaborative Strategies

By using collaborative technologies (groupware, etc.) widely dispersed work teams can easily share information, whether they are located across the country or around the

world. Collaborative tools are simply electronic tools that support communication and collaboration – people working together. Essentially they take the form of networked computer software that lets different people coordinate their work activities.

The fundamental inefficiencies of that approach are creating numerous enterprise pain points. Users cannot find the most current version of content because it is locked in individual e-mail files. Very little structure is available in e-mail to drive best practices. Content artifacts—like documents and threaded discussions—are not easily reusable. And it is difficult and costly to identify content that requires special handling for compliance, security and privacy purposes. File servers, while offering some improvement, are also a woefully insufficient solution.

How are organizations addressing those inefficiencies? They are moving collaboration from e-mail to workspaces and more robust content-centric collaborative applications that may include custom coding and workflow. The use of social networking that enables Facebook-like (facebook.com) capabilities within the enterprise is also on the rise. With the technology, companies realize a number of benefits, including:

- **Knowledge worker efficiency:** By providing users with a single place to store and collaborate on content, collaborative platforms remove inefficiencies associated with collaboration through e-mail. Basic library services like check-in, checkout and versioning allow greater control over content creation and sharing. Further, IT's ability to build and deploy custom templates and workflow drives more efficient and effective business process flows.
- **Improved knowledge capture:** Information stored in e-mail systems is difficult to leverage for future reuse. By moving content into a collaborative platform, workers can more easily discover and reuse knowledge artifacts—like presentations, forms and images. Consider, for example, the value of capturing and reusing even a small number of the documents, discussions and activities associated with developing a complex sales proposal.
- **More effective management of content:** Not all content is created equal. Some content, such as repair manuals or official memos, needs to be managed more stringently for reasons of accuracy, compliance, discovery, security and/or privacy. By moving users into collaborative platforms, organizations can more easily identify content that requires special handling and apply policy management within the platform or move content programmatically into a separate system of record.
- **Increased social networking effect:** Social networking capabilities, like those found on the popular consumer site Facebook, are quickly augmenting the value of traditional e-mail or document-focused collaboration tools. Enterprise-focused social networking capabilities greatly enhance knowledge workers' ability to access relevant content and expertise in a business setting. Collaborative

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platforms are increasingly providing social networking capabilities and/or integrating with best-of-breed product offerings.

The collaborative platform market is not new. However, it has evolved greatly over the past several years. New communication and content generation patterns—like microblogging (see related article on page 10, KMWorld Nov/Dec 2009), activity streams and business social networks—attracted many new and highly relevant vendors to the market from the social networking perspective. Information and knowledge management (IKM) concept increasingly compare those vendors to more traditional collaboration vendors because of their ability to address similar business issues around sharing information.

At the same time, traditional collaboration vendors have recognized and reacted to the unique capabilities of social networking and are actively building those capabilities into their offerings. Lastly, traditional content management vendors continue to extend into collaboration, building out social capabilities as well.

Tools Used in Collaborative Strategy

The various tools can be provided as part of a groupware package, over an intranet, or in some cases as standalone tools. Common collaborative tools include the following:

- **Email:** A simple electronic version of written mail, and undoubtedly the most widely used collaborative tool. Messages are sent via an electronic network and attachments can be added. Such a copies of documents, presentations and e-mail can be used between individuals, or to broadcast messages to a wider audience.
- **Discussion boards:** Discussion boards (also known as message ' oards, bulletin boards or chat rooms) give people the ability to post and reply to messages in a common area. Sometimes a leader or facilitator will moderate these boards. Their purpose is to provide an "informal meeting place" a bit like a café. People can ask for advice and share information around topics of interest. Discussion boards are often used to support communication within communities of practice.
- **Video conferencing:** Video conferences can either be done using specialized video facilities, or from people's desktops using computer software. Video conferencing works well for situations that require a degree of trust and relationship building, for discussing issues and exploring ideas, and in situations where you don't need a detailed permanent record to be generated automatically. Consideration needs to be given to the quality of the video link, as many of the benefits can be lost through poor quality. Also, be aware that not everyone likes, or feels comfortable with, video conferencing An alternative is audio (telephone) conferencing, which tends to work best when participants already know each other.

- **Project support tools:** There are a number of tools that enable work groups and project teams to share documents and exchange messages across different locations in "real time". For example, when a group is working on a shared document, there needs to be a tool to make the document centrally available, allow people to make changes, synchronise the changes made, and ensure that the most up-to-date version is clearly available. Similarly, remote project teams can take advantage of "electronic whiteboards" to brainstorm together, generate lists of options, draw or map concepts visually to aid understanding, display and analyse data together etc.
- **Work flow tools:** Work flow tools are developed to model typical processes that take place in organisations. They enable people to work together on shared tasks, with some of the core process knowledge embedded in the design of the work flow software application. An example would be a purchasing or transaction process, starting with the creation of an order and ending with the supply of goods. Where several people and a sequence of documents and processes are involved, automation can help speed up the process and also provide information about what stage the process is at, at any given time.
- **E-learning tools:** E-learning is a rapidly growing field and uses information technology to deliver learning and training to people electronically at their desktop. There is a wide variety of tools and technologies available to support e-learning, many of which include facilities for learners in different locations to work together on assignments, case studies and projects.
- **Virtual working tools:** At the highly sophisticated end of the spectrum, technologies are emerging that allow the knowledge and expertise of a person in one location to be directly applied in another location in real time. Such technologies allow knowledge to be not only shared, but applied, remotely. For example, in 2001 a pioneering surgical procedure was tested in which two surgeons in New York operated on a patient in France, using joysticks and voice commands to direct three robotic arms in the operating room. This was the first instance of remote surgery on a human. Similar technologies have already been used quite extensively in fields such as engineering.

Case: Samsung's Knowledge Creation Is Catching Up

Despite the skepticism, that it lacked the technological capability to enter and remain competitive in the semiconductor industry, Samsung Electronics Company has leapfrogged from a mere producer of discrete devices to the most vibrant producer of dynamic random access memory (DRAM) chips in only a decade. Samsung has emerged as the largest memory chipmaker and the seventh-largest semiconductor maker in the world. Samsung's production increased from $83 million in 1985 to $5.2 billion in 1994. In memory chips, already dominant in 4

megabyte and 16-megabyte DRAM semiconductors, Samsung is ahead of Japan in 64-megabyte and 256-megabyte generations, while also attempting to crack more profitable applications-specific integrated circuits (ASICs).

It was in 1974 when the first local semiconductor firm was established by a Korean American scientist with a Ph.D. from Ohio State University and semiconductor design experience at Motorola. Samsung bought out the company during a financial crisis that occurred in the company's first year. With a large stake in consumer electronics, Samsung made the acquisition turned-entrepreneur provided Samsung with an even higher tacit knowledge base. His tacit knowledge was effectively transferred to Samsung engineers. This enabled the firm to progressively produce various transistors and integrated circuits on a small scale, largely for house consumer electronics. Samsung also established its semiconductors R&D laboratory in 1982.

Samsung set up an R & D outpost in Silicon Valley in 1983 and hired five Korean Americans with doctorates in electronics engineering from Stanford, Michigan, Minnesota, and Notre Dame Universities with semiconductor design experience at IBM, Honeywell, Intel and National semiconductors. These scientists, plus about three hundred American engineers, including several designers who left Mostek, brought to Samsung the crucially important tacit knowledge to crack VLSI technology. Silicon Valley was a strategic location for the development of the 64k DRAM. A high density of scientists and engineers in the vicinity offered the rich source of critical information and expertise that Samsung needed. The outpost also provided opportunities for engineers in Korea to participate in training and research in USA and enabled them to learn significantly about VLSI technology.

Samsung organized another R&D task force in Korea with Samsung engineers who were experienced in LSI and trained on VLSIs at technology suppliers and two Korean American scientists. The scientists had 64k DRAM development experience at American companies and gave Samsung a significantly higher level of tacit knowledge. Active interaction between the outpost in Silicon Valley and the team in Korea, through training, joint research, and consulting, elevated significantly both the tacit and explicit knowledge within the Korean team in a very short period of time resulting in the effective transfer of knowledge from silicon valley to Korea. This made Samsung engineers better equipped to assimilate VLSI technologies from Micron Technology and Zytrex. In short, Samsung had deliberate strategy to upgrade its prior tacit and explicit knowledge, expanding its prior knowledge base.

The goal was clear to all members. Personal dedication and long working hours expedited knowledge conversion at the individual level. The shared awareness of a crisis and determination to solve problems within the assigned time frame intensified close interaction among members. This, together with

high prior knowledge, led to rapid knowledge conversion among the individual members and to a high rate of knowledge creation at the organizational level enabling Samsung to have a high absorptive capacity. Samsung managed the crisis to become creative. Samsung hit the market with a 64K DRAM in early 1984, some forty months after the American pioneer and about eighteen months after the first Japanese version became commercially available. Korea became the third country in the world to introduce DRAM chips and significantly narrowed the technological gap with Japan and USA.

Source: *http://www.egyankosh.ac.in*

3.4 MOTIVATION FOR KNOWLEDGE MANAGEMENT

There may be different reasons why Knowledge Management will be developed within organizations. Some of them are:

- The need for making available increased knowledge content for the development and provision of products and services.
- For facilitating and managing organizational best practices, innovation and continual learning
- For achieving better quality products in shorter development cycles.
- For leveraging the knowledge of subject matter experts across the organization
- For managing the distribution of data and information in different business environments, enabling people within to reuse information and best practices.
- For employees to benefit from "networking" wherein there is a personal and team growth by way of learning and sharing information.
- Managing the intellectual capital developed within the organization.

3.5 KNOWLEDGE MANAGEMENT TECHNOLOGIES

Knowledge Management requires technologies to support the new strategies, processes, methods and techniques to better create, disseminate, share and apply the best knowledge, anytime and anyplace, across teams, across the organisation and across several organisations, especially its clients, customers, partners, suppliers and other key stakeholders.

The key technologies are communication and collaboration technologies that are web based for internet and intranet usage, as well as mobile technologies such as PDA's, PC's, telephone and videoconferencing. New technologies are

rapidly emerging that act as intelligent agents and assistants to search, summarise, conceptualise and recognise patterns of information and knowledge.

For an effective KM initiative across the organisation, there needs to be in place, at least:

Knowledge Portal

There is often confusion between the terms 'information portal' and 'knowledge portal'.

An information portal is often described as a gateway to information to enable the user to have one, more simplified way of navigating towards the desired information.

However a 'knowledge portal' is far more than an information portal because, as well as information navigation and access, it contains within it software technologies to, at least, support the processes of virtual team communication and collaboration and software technologies to support the 9 step process of managing knowledge. Furthermore, it contains intelligent agent software to identify and automatically distribute information and knowledge effectively to knowledge workers based on knowledge profiling.

Knowledge Profiles

Within the knowledge portal, each knowledge worker can update and maintain a personal 'knowledge profile' which identifies his/her specific knowledge needs, areas of interest and frequency of distribution.

Collaborative workspaces

Within the knowledge portal, shared work spaces can be set up for each new team or project. These will become knowledge repositories from which new knowledge will be distilled regularly and systematically and shared across other teams in the organisation. Within the shared and collaborative workspace, at least, the following communication and collaboration functions could be performed:

- Shared vision and mission
- Specific team objectives
- Knowledge plan
- Team members roles and responsibilities
- Team contract
- Best knowledge bases or banks
- Expert locator
- Task management
- Shared calendar management
- Meeting management
- Document libraries

- Discussion forums
- Centralised email
- Capturing of new learnings and ideas
- Peer reviews, learning reviews, after action reviews
- New knowledge nominations.

Urgent requests

Within the knowledge portal, it is very useful to have a facility and underlying process to enter any 'Urgent Request' into the portal and receive back any responses from across the organisation. Rather than needing to know 'who might know' the request is entered blindly and responses will be made if it is known in the organisation and people are willing to support and respond to this activity. This is a very effective way of better leveraging the knowledge across the organisation.

Document Libraries

The document library is typically the location where all documents are stored. The library should be context relative and allow the ease of control over any document type. Many organisations now employ an Electronic Document and Records Management System (EDRMS) for this requirement but the integration of the EDRMS with all other relevant information and knowledge sources is imperative.

Knowledge Server and services

In order to foster knowledge networking across the entire organisation and support knowledge processes for creating, retaining, leveraging, reusing, measuring and optimising the use of the organisational knowledge assets, a centralised knowledge server is required that will:

- manage the communications and collaboration between networks of people
- enable the access, creation and sharing of knowledge between them

The centralised knowledge server will manage the processes and knowledge services that generate and disseminate knowledge assets.

The key components of a generic knowledge server are:

- a knowledge portal interface designed around a knowledge asset schema (see KM consulting section) as a gateway to user access, security and applications
- Knowledge banks
- Advanced search capabilities ▪ collaboration services ▪ search and discovery services ▪ publishing services based on user knowledge needs and knowledge profiling ▪ a knowledge map (taxonomy) ▪ knowledge repository for information and process management ▪ text summarising and conceptualising ▪ intelligent agentware ▪ an intranet infrastructure for integrated email, file servers, internet/ intranet services

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Knowledge Bases (Banks)

For each key knowledge area identified, there needs to be a Knowledge Base. A Knowledge Base contains:

- Both structured and unstructured discussion forums
- Rich 'knowledge objects' that have been designed for the efficient and effective transfer of knowledge using multimedia, video, audio
- Embedded communications theory (for e.g., storytelling)
- KM processes to:
- Critically review knowledge nominations and turn them into improved knowledge
- Automatically find and publish knowledge to users according to users knowledge profiles
- Transfer knowledge effectively.

3.6 KNOWLEDGE MANAGEMENT SYSTEM

The aim of every organisation is to achieve its set goals and objectives as well as secure competitive advantage over its competitors. However, these cannot be achieved or actualised if staff or workers act independently and do not share ideas. Today, prominent businesses are becoming more aware that the knowledge of their employees is one of their primary assets. Sometimes organisational decisions cannot be effectively made with information alone; there is need for knowledge application. An effective knowledge management system can give a company the competitive edge it needs to be successful, and, for that reason, knowledge management projects should be high priority.

This means that for any organisation to be competitive in today's global world there is need for combination or pooling together of ideas by employees in order to achieve teamwork; this is in support of the saying that 'two good heads are better than one'. Since organisational knowledge is one of the important assets of the organisation, it needs to be managed like other assets, hence the need for knowledge management systems (KMS).

Knowledge management systems 'collect all relevant knowledge and experience in the firm and make it available whenever and wherever it is needed to support business processes and management decisions'. Knowledge here could be referred to as the understanding that a person has gained through education, experience, discovery, intuition and insight or a combination of instincts, ideas, rules, and procedures that guide actions and decisions. It is an intangible asset that is unique and can be used to achieve long-term strategic benefits or advantage. This is because knowledge has more competitive significance than physical assets in a consulting organisation like ours that relies on unique competencies and methods. Also, unlike other physical

Check Your Progress

1. Define knowledge.
2. What do you mean by a knowledge management strategy?
3. What is organizational culture?

assets of an organisation, knowledge is not subject to the law of diminishing returns as are physical assets, but increases in value as people share it.

Knowledge can be in a form that can be stated, codified or written and understandable by everyone (explicit) or in a form that cannot be expressed easily and unconsciously applied but understood by individuals (implicit or tacit). Therefore, what knowledge management systems do is to provide collaborative capabilities, using groupware to facilitate sharing of explicit and implicit knowledge among employees. It is also meant to change people's behaviour to make their experience and expertise available to others. These systems involve a process that helps organisations identify, select, organise, disseminate and transfer important information and expertise that are part of the organisational memory that typically resides within the organisation in an unstructured manner.

The main objective of knowledge management system is to identify knowledge and explicate it in a way that it can be shared in a formal manner, and thus reusing it. It helps in transferring the intellectual assets of the firm to value processes such as innovation and knowledge acquisition. It is meant to improve the organisation's ability to execute its core processes more efficiently by capturing intellectual assets for the tangible benefit of the organisation. Knowledge management systems also aim at codifying knowledge (such as best practices), organising it in repositories for later access, finding knowledge (using search engines and other schemes), and providing organised ways to find people who possess the required knowledge.

It is poised towards determining what knowledge the organisation has, as well as acquiring the knowledge that is lacking for the purpose of providing collaborative capabilities and facilitates sharing of explicit and implicit knowledge among employees. Knowledge management systems enhance knowledge creation through learning, knowledge sharing and communication through collaboration as well as knowledge capture and explication, use and reuse, access and archiving. It is meant to transform information and intellectual assets into enduring value for the organisation and transform knowledge to add value to the process and operations of the business. It also aims at leveraging knowledge strategic to business to accelerate growth and innovation as well as using knowledge to provide a competitive advantage for the business.

These systems also capture knowledge about how problems can be solved in order to promote organisational learning, leading to further knowledge creation. In doing this, intellects that are in the form of tacit knowledge in individuals, groups within the organisation and other areas are transferred to value processes that lead to innovation, knowledge creation and replenishment of the organisation's core values. Knowledge management systems also capture knowledge in an external repository, identify needed knowledge and help in matching and exchanging knowledge. Some technologies that support this system are: e-mail, document management, search engines, enterprise information portal, data warehouse, groupware, workflow

management and web-based training. Knowledge management systems are also meant to provide collaborative capabilities, using groupware to facilitate sharing of explicit knowledge among employees; its activities or processes are supported by software such as Wincite, grapeVine, and Knowledge X.

In summary, the four broad objectives of knowledge management systems are as follows:

- Create knowledge repositories.
- Improve knowledge access.
- Enhance the knowledge environment.
- Manage knowledge as an asset.

3.6.1 Knowledge Management System: Costs and Benefits

Knowledge management systems (KMS) like any other information systems have its benefits as well as costs, weighing the benefits in relationship with the costs will probably provide a basis for deciding whether to invest in it or not.

Costs

Although knowledge management system is beneficial and important to the organisation, it also involves some cost. These costs vary quite a bit, depending on the size of the organisation, the current level of infrastructure and the scope of knowledge management initiative. Also, the cost depends on whether or not there is an existing infrastructure.

According to Marks, the first step in determining the return on investment for a knowledge management project is to determine the costs. On the surface, this may seem deceptively simple, but there are costs involved in a knowledge management project that may not be readily obvious to the manager who is not experienced in estimating such projects. Costs here include, but are not limited to the costs of hardware, software, and training.

1. **Software:** Obviously, the project will incur the cost of whatever software is chosen to be used. This can range from free, to nearly free, to several thousand dollars for an enterprise-wide knowledge management (KM) system. In addition, any technical infrastructure for the software that is needed will also have to be counted in the costs. The cost of software depends on whether the organisation wants to use the bare-bones knowledge management systems, which may use e-mail, Web servers, corporate intranets, newsgroups, shared file systems, or centralized databases and other software the company likely already has and uses, or can obtain for little or no cost. Or the company wishes to institute a level of knowledge integration and manage knowledge transfer which will involve investment in a commercially available product designed specifically for the tasks that the company wishes to be able to accomplish with the knowledge management project.

2. **Hardware:** This involves the costs of infrastructure that will be needed to support the system. These might also be needed for internet and network connections. Any upgrades to the company's network that will be needed in order to handle increased traffic attributable to the knowledge management system might also need to be considered. Using current systems and equipment will lead to heavier loads than in the past, and this will need to be considered too.
3. **Labour:** It involves the cost that will need to be considered as the cost of employing a member of the IT staff to install the KM hardware and software on all needed servers and client machines as well as configuring the application to meet the need of the business. There will also be need for maintenance. Knowledge will need to be inputed into the system in order for it to be useful, the costs for doing this might be heavy early on, but will steady out in the future, and will be based on the use of the system. The cost of training should also be considered as a labour cost due to the time sacrificed for it.

Other, not so obvious costs that will be incurred include employee training, incentives to entice employees to use the KM system, and the labour costs of employees choosing to use the knowledge management system instead of working on other aspects of the job. Most of these labour costs will become benefits fairly readily, but they are an investment made by the company and must be counted in the costs of the knowledge management project in order to accurately measure or predict the cost of the project.

Implementation costs are usually moderate to acquire the hardware, develop internal software or license software from third party suppliers, and to train employees to utilize the system effectively. However, the potential savings and increased efficiencies are enormous. Payback period for most companies is estimated to be six months or less. The payback period will decrease as the size of the organization increases, and with the number of global locations that the company operates. McDonald and Shand, 'reported that a typical consultant-assisted knowledge management system costs between $1.5 million to develop'.

Benefits

Before any organisation can invest their funds in anything, there must have been some expected or anticipated benefits or returns, there is need to highlight the benefits and cost of knowledge management systems. This system just like any other information systems is meant to add value to the organisation, but knowledge management system, deals particularly with the intellectual asset of the organisation. Although the major reason why most organisations invest in Knowledge Management Systems (KMS) is to gain competitive advantage, other derivable benefits are:

1. **Efficiency and Problem-Solving:** Knowledge management systems when done right will help in ensuring faster response time to key issues, make service delivery faster and also enhance problem-solving. This is because when best

practices are well codified, stored, and made available, and when methods for problem-solving can be maintained, and made available instantaneously, employees won't have to spend time looking for answers. Problem-solving will be eased as it will be possible to solve problems anytime and anywhere which will make the organisation more productive, efficient and effective. Due to the nature of this organisation, (consulting firm), the application of knowledge management systems will help in carrying out the needed services efficiently. For example, expert and dependable advice will be given to clients based on the availability of experiences and knowledge for comparison and justification.

2. **Better Decision-Making:** Knowledge management systems will help in making better decisions. When knowledge and experiences are pooled together, there is an avenue for critical considerations and judgement before decisions will be made. This is particularly important when there is need to compare and contrast before arriving at a decision or conclusion. The availability of needed idea, information and knowledge will help in making sure that the right decision is taken after critical and intense examination which will also make the decision more concrete, justifiable and dependable. This will make this firm able to make necessary decisions on the needed improvements that will make our services more competitive and acceptable (preferable to client).

3. **Quality Service Delivery:** One benefit that will be obtained will be the increased quality of services after using the KM systems. An employee who uses the knowledge management system may be able to obtain knowledge that will reduce the amount of defective services that employees deliver or will increase the effectiveness and quality of the services being delivered. Higher quality services mean fewer dissatisfied clients, which mean fewer complaints from clients. Fewer complaints improve the company's revenues and profit and are a benefit that can be attributed to a knowledge management system. If a company can notice a decrease in clients' dissatisfaction since the knowledge management system was launched, at least a significant portion of this increase can be attributed to the KM system and marked as a benefit for it. This means that this organisation will be able to come up with better and more competitive services due to the possibility of sharing valuable organisational information, knowledge, intelligence and experiences among employees. This serves as a good way of avoiding or reducing redundancy and client satisfaction will be secured due to the improvements that will be introduced.

4. **Reduced Cost:** Cost reduction is also a benefit that can be realized through the use of a knowledge management system. 'Cost reduction represents approximately one quarter of benefits from KM projects'. Besides labour costs, knowledge management systems may also yield a savings in material costs. This can be as simple as savings on paper that was previously needed to disseminate memoranda that are now being replaced with entries in the

knowledge management program, but the true benefit of cost reduction through knowledge management is realised when employees discover and share methods for reducing costs on final products. Management will likely notice these savings, but will need to speak with employees to understand that the source of the savings is indeed from the knowledge management system. This means that this organisation will be able to reduce cost of inviting or seeking professionals, due to the availability of needed knowledge and experiences.

5. **Speed and Service Delivery:** Knowledge management systems help in compressing time and space for efficiency, reducing time wastage, which means increase in workers' productivity. Employees who use the knowledge management system will be able to work faster, because they will find information on the knowledge management environment that will allow them to avoid repeating the work of others, such as a snippet of computer code, or allow them to forgo extensive research that would ordinarily be needed to address a situation, or simply enlighten them to practices others have found that allow the job to be done more quickly. The only way to measure this labour cost savings will be through interviews with the employee. The employee's estimate and confidence in it will be calculated as a benefit for the knowledge management system. This means that clients will be attended to as fast as possible, which will give the firm an advantage, especially by reducing delay.
6. **Reduced Training Time:** An investment in these systems will help to reduce training time for new employees. Due to the availability of the needed knowledge and experiences, employees will be able to constantly apply them which will improve their ability. Thus training time for employees will be reduced as a result of the knowledge they are able to acquire. This means that employees are being trained indirectly through the application of knowledge management systems which reduces direct training. This will lead to a kind of strategic movement through well-coordinated efforts among peers. Thus the organisation will be able save time and money.
7. **Retention of Intellectual Properties:** Knowledge management system helps in retaining intellectual properties after the employee leaves if such knowledge is codified. This is because when knowledge is codified, it is added to the organisation's knowledge repository (a collection of internal and external knowledge), thus when knowledge is captured from an employee, such knowledge will remain even after he/she leaves. This means that it will be possible for the organisation to have a large knowledge base of several knowledge and experiences as a result of the historic knowledge contribution process. This will also help in building employees to become professionals as a result of the availability of previous experiences and knowledge for acquisition.

8. **Increased Revenue and Development of New Business Ventures:** Knowledge management systems help in providing the personnel capacity for revenue generation. It allows employees to work together and share ideas about certain plans especially in a global firm. Due to the cross-pollination of ideas among employees, there is a possibility that new business ventures will be developed and this will lead to an increase in revenue for the organisation. Due to the availability of ideas and experiences, this organisation will be able to manage the available knowledge for productivity and profitability.
9. **Sharing Business Resources over Long Distances:** Through the use of knowledge management systems, the sharing of business resources is made possible. This is because when ideas and knowledge are pooled together, a knowledge-base is created from which each employee can access required information over long distances. If used effectively, these systems will be able to foster the company's culture across geographic boundaries. All employees will become part of an overall network, each with simple access to the intellectual capital of every member within the network. As a result employees will be able to perform better and jobs would be done faster. This is very important for a global consultation firm like this where relevant information is needed for service delivery. There will be no need to depend solely on the headquarters before needed information are gotten.

3.6.2 Knowledge Management System: Conditions for Success

Certain factors or concerns also need to be considered in order to make this firm's investment in Knowledge Management Systems (KMS) worthwhile. There is need for a major transformation in organisational culture to create desire to share, (give and receive). When there is organisational culture barrier, people tend to hoard their knowledge. One of the reasons why employees don't share knowledge is the belief that knowledge is power and that hoarding it guarantees job security. Employees also tend to believe that there is no credit for knowledge sharing or won't be able to own it anymore if they share. There might also not be time for knowledge sharing or the employees may be afraid of making mistakes or being reprimanded. Some employees also do not know how to share knowledge or do not realise that their knowledge is valuable to the organisation.

In order to solve these problems, employees need to be educated on the value of knowledge and how they can be shared and used. Also, reward and recognition systems should be revamped and make knowledge sharing a requirement of the job. Employees should be made aware that making mistakes is not a crime, but an opportunity to learn and know more.

Other concerns are the development of methods that ensure that knowledge bases are kept current and relevant, and a commitment at all levels of a firm for it to

succeed. It is important that all employees work together by pursuing the same aim or goal for the firm to progress. When employees are willing to work for the firm with commitment, then an investment in knowledge management systems will yield results. According to Davenport et al., knowledge management success factor could be links to 'economic performance or industry value; a technical and organisational infrastructure; a standard, flexible knowledge structure; a knowledge-friendly culture; a clear purpose and language; a change in motivational practices; multiple channels for knowledge transfer; and senior management support'.

In conclusion, knowledge management system is surely most suitable information system for this organisation. This is because it is a new strategic initiative that is changing the paradigm of information systems from the one of processing data and providing information to one of harvesting and capitalising on the knowledge of an entire organisation, ranging from expertise in individual's heads to documented material. In today's global business climate, companies must be able to retain and transfer internal information quickly from one party to another. The internet has not changed the need for information sharing; it has only lowered the barriers inhibiting such transfer of knowledge. The introduction of knowledge management system will empower employees in this firm to perform better due to the opportunity to contribute and receive knowledge during their time with the organisation. This will guarantee a competitive advantage over other firms who do not have this information system.

However, it is important to note that a robust knowledge management system alone without considering the factors that affect it, will not guarantee success for the firm, but a lack of a KMS will also put the firm at a great disadvantage in comparison to the knowledge management systems (KMS) initiatives by competitors.

3.7 KNOWLEDGE MANAGEMENT REFLECTING IN DECISION EXECUTIVE CYCLES (DECs)

Decisions are produced by planning and are embodied in acting. Decisions produce actions, and actions - activities - are the stuff that social processes, social networks, and (complex adaptive) organizational systems are made of. Figure 3.2 illustrates the phases of Decision Execution Cycles. DECs use previously existing individual-level knowledge to arrive at decisions and actions. Personal knowledge is always the immediate precursor to action. DECs also generate new knowledge about specific conditions and situations by using preexisting knowledge in a routine way to monitor, evaluate, plan and decide. This is the Single-Loop Learning (SLL) of Argyris and Schön (1974). In addition, DECs play a key role in initiating and performing Double-Loop Learning (DLL) (Argyris and Schön, 1974) – learning of new knowledge (in the form of general predispositions and rules, and specific knowledge) that requires problem-solving and is not just a matter of perception or direct apprehension or comprehension.

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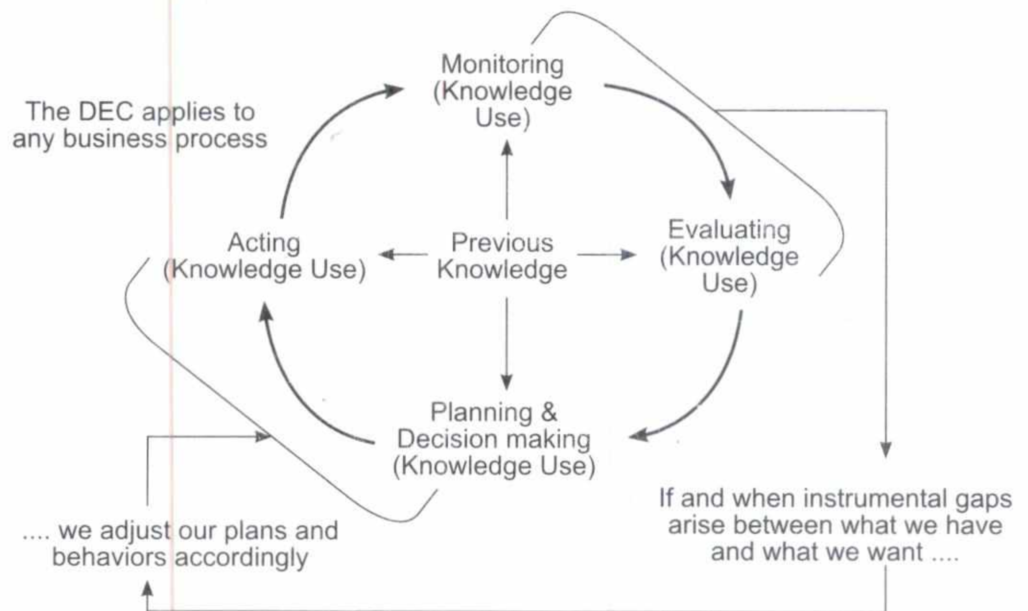


Fig. 3.2: The Decision Execution Cycle

Elsewhere, we (Firestone and McElroy, 2003, 2003b and Firestone, 2003, 2003b) have described how routine DECs give rise to DLL. In brief, DEC decisions and actions are accompanied by expectations. During monitoring and evaluating, the individual determines the degree to which results match the expectations accompanying decisions, and when mismatches occur, the seriousness of the mismatch from both the factual and evaluative perspectives (see Figure 3.3). When the mismatch is great enough from the viewpoint of the individual, and when the individual decides that previous knowledge won't work to reduce the mismatch, the individual recognizes that a gap exists between what the individual knows and what she or he needs to know in order to pursue the goal(s) or objective(s) of the associated DECs. This knowledge, or epistemic, gap is what we mean by a "problem," and recognition of it is what we mean by "problem recognition." When a DEC results in problem recognition, the individual can either abandon or suspend pursuing the goal or objective motivating associated DECs or alternatively, the individual can engage in problem-solving or DLL, a process composed of multiple learning-related DECs motivated by a learning incentive. Following Popper (1999), we view DLL most generally as an emergent (i.e., non-deterministic) three-stage knowledge process comprised of problem formulation, developing alternative solutions, and error elimination, the stage in which we select among alternatives by eliminating the ones we think are false. Among the results of error elimination is knowledge, which we'll discuss briefly below. Here we call attention to the need, once new knowledge is produced, for further knowledge processing to integrate it into the DEC and business process environment that originated it, and into the organizational memory that will make it available for re-use later.

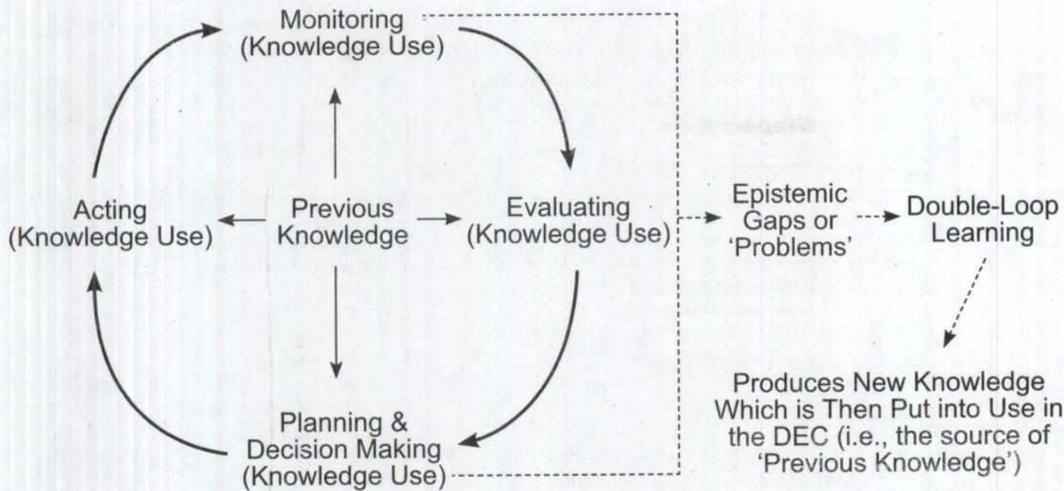


Fig. 3.3: The Decision Execution Cycle and Problem Recognition

3.8 KNOWLEDGE MANAGEMENT REFLECTING IN COMPLEX ADAPTIVE SYSTEM (CAS)

By definition a Complex Adaptive System (CAS) consists of numerous independent parts, usually called "agents," which are constantly undergoing simultaneous non-linear interactions with one other (Holland 1992; 184). In a national economy, the agents can be individuals, firms, or households; in a brain, neurons; in an ecosystem, species of organisms; and in a living cell, organelles. The agents of a CAS are often themselves CASs. Levels in the biological hierarchy of CAS building blocks, for example, include cells, tissues, organs, organisms and ecosystems.

Emergent phenomena at the group and global system levels in organizations exhibit "downward causation" on individual decision makers in such systems (Campbell, 1974, Bickhard, 2000). These phenomena include social, geo-physical, economic, and cultural conditions, and also social network effects presented to individuals in the form of transactions directed at them by other decision makers who collectively constitute the emergent network pattern (see Figure 3.4) of the organizational CAS (Firestone and McElroy, 2003, chs. 2 and 4). When we look more closely at individual CAS agents and their decisions, we connect to matters that have received a great deal of attention in the field of organizational learning. Decisions are part of a sequence of cognitive operations that have been described in the literature in slightly varying terms, using many names (e.g., the organizational learning cycle, Ackoff, 1970, the experiential learning cycle, Kolb and Fry, 1975, Kolb, 1984, the adaptive loop, Haeckel, 1999, and others).

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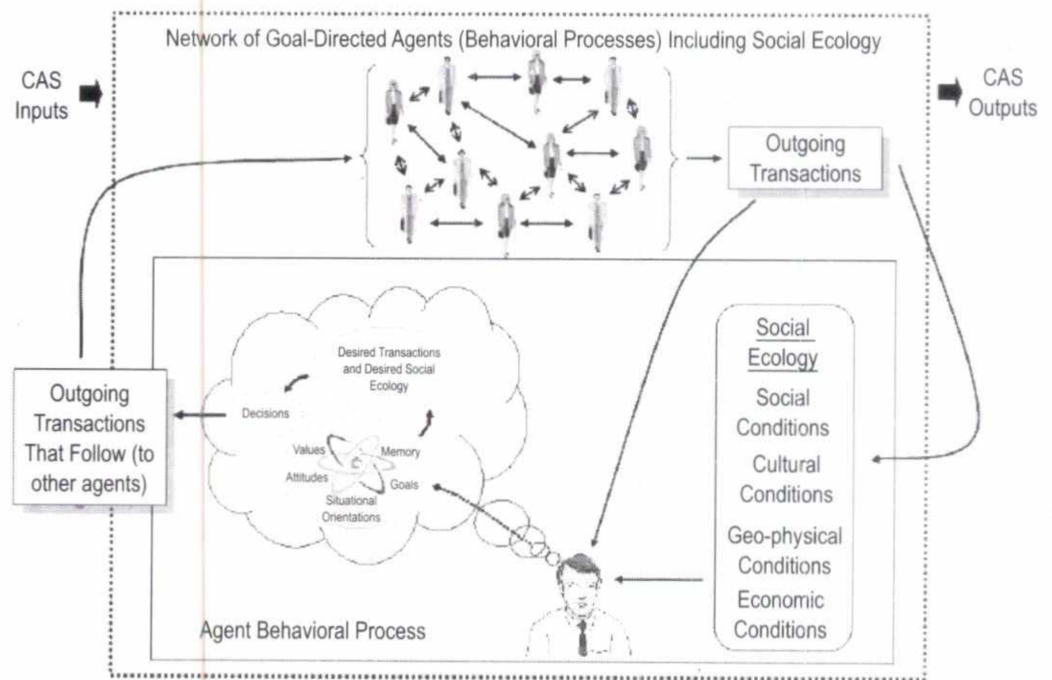


Fig. 3.4: The Organizational CAS

3.9 KNOWLEDGE MANAGEMENT REFLECTING IN LEARNING ORGANISATIONS (LO)

An organization is a group of individuals. A group has evolved a culture, with the strength of that culture dependent on the length of group's existence, the stability of the memberships of individuals in the group, and the emotional intensity of the actual historical experiences they have shared. Consequently, it takes time to foster a new culture, e.g. a learning one. A Learning Organization has a culture that supports learning and innovations both by individuals and by the organization itself. The environment promotes a culture of learning, a community of learners, and it ensures that individual learning enriches and enhances the organization as a whole. The process of learning must ultimately be made part of the culture, not just be a solution to a given problem. Becoming a true Learning Organization is what will enable a corporation to be the Wisdom Company and the Employer of Choice. In his August 1993 Harvard Business Review article on "Building a Learning Organization", Harvard Business School Professor David Garvin defines a Learning Organization as "an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights." The key is that change occurs in the way work gets done. Dr. Garvin includes the following in the activities of a Learning Organization:

- **Systematic problem-solving:** Thinking with systems theory; insisting on data rather than assumptions; using statistical tools

- **Experimentation with new approaches:** Ensure steady flow of new ideas; incentives for risk taking; demonstration projects
- **Learning from their own experiences and past history:** Recognition of the value of productive failure instead of unproductive success
- **Learning from the experiences and best practices of others:** Enthusiastic borrowing
- **Transferring knowledge quickly and efficiently throughout the organization:** reports, tours, personnel rotation programs, training programs

At the September 12, 1996 session of the "Worldwide Lessons in Leadership Series", Learning Organizations guru Peter Senge stated that nothing much would get done if only the rules were followed. He said that the human system is the source of all work that gets done – innovation, etc. The formal system currently dominates the informal or human system. Instead, the formal system should be an enabler for the human system.

Transforming the formal system at a corporation into a Learning Organization will create the environment needed for the human system to thrive and will give the firm unmatched competitive advantage. As part of this process, the corporation needs to forget its old ways to make room for the new. The entire corporation's ecosystem needs to become one huge classroom. Effective feedback mechanisms need to be created and deployed that enable new ideas to be continually absorbed so that the best of them can be turned into action or new products and services.

3.10 KNOWLEDGE MANAGEMENT REFLECTING IN DISTRIBUTED ORGANISATIONAL KNOWLEDGE BASE (DOKB)

When we view knowledge processing at levels of analysis higher than the individual level, we identify the pattern including problem claim formulation, information acquisition, individual and group learning, knowledge claim formulation, and knowledge claim evaluation as the knowledge production process resulting in both new tested and surviving beliefs and knowledge claims. Once new knowledge is produced at the collective level, it must be integrated into organizational memory, key DECs and business processes. This process of knowledge integration is made up of four more sub-processes, all of which may use interpersonal, electronic, or both types of methods in execution. They are: knowledge and information broadcasting, searching/retrieving, knowledge sharing (peer-to-peer presentation of previously produced knowledge), and teaching (hierarchical presentation of previously produced knowledge). Knowledge integration is about system-level knowledge claims being communicated from one part of the Distributed Organizational Knowledge Base (DOKB), the configuration of previously produced knowledge claims, beliefs and belief

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predispositions in the organization (Firestone and McElroy, 2003) (see Figure 3.5), to another. Knowledge claims are stored in media and information systems. Beliefs and belief predispositions are stored in minds.

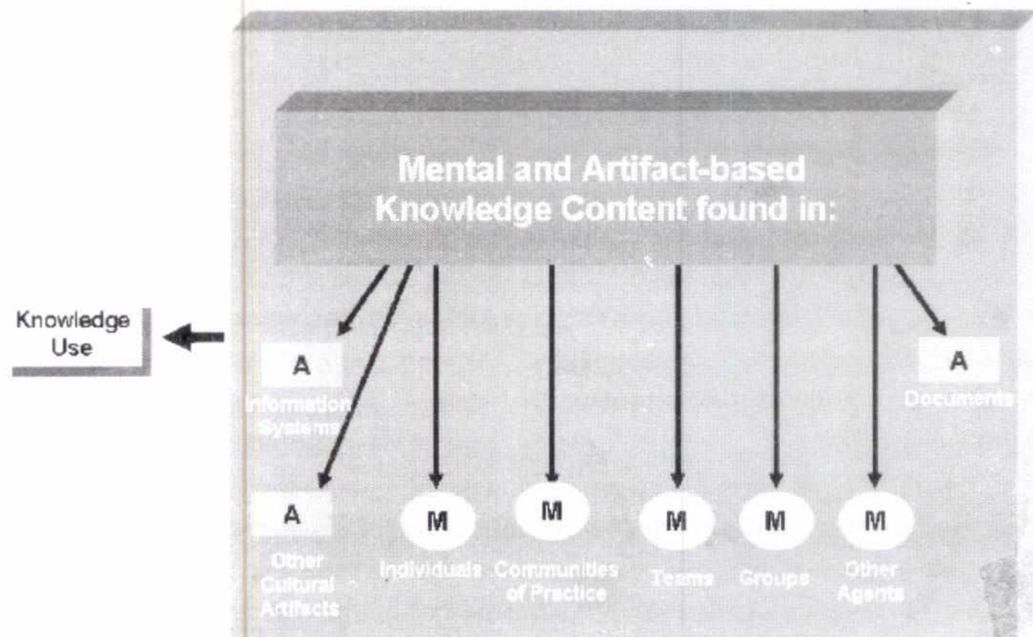


Fig. 3.5: Distributed Organisational Knowledge Base (DOKB)

Through the DOKB, both knowledge claims and belief phenomena are accessible in varying degrees to individual decision makers in DECs, within both the Business Processing Environment, and the knowledge and KM processing environments. That is, the DOKB is the knowledge and information foundation for all of the organization's DECs and processing environments. When knowledge claims are evaluated, results of evaluation in the form of changes in beliefs and new knowledge claims, including those we call "meta-claims" which provide the "track record" of criticism, testing, and evaluation of knowledge claims produced during knowledge claim formulation, are stored in the DOKB. Knowledge claims, as well as meta-claims, are then integrated and reintegrated into the DOKB as they are broadcasted, retrieved, shared and taught again and again.

3.11 KNOWLEDGE LIFE CYCLE AND THE BUSINESS PROCESSING ENVIRONMENT

The conventional practice of knowledge management – if there is such a thing – is often associated with the following common phrases:

- It's all about getting the right information to the right people at the right time
- If we only knew what we know
- We need to capture and codify our tacit and explicit knowledge before it walks out of the door

Most of us in KM have heard these expressions many times before. In a very real way, they speak volumes about our assumptions concerning the purpose and value of KM, as well as the scope of it. In particular, the unspoken assumption behind each of these statements is that valuable knowledge exists – all we need to do is capture it, codify it, and share it. According to this view of knowledge management, the practice of KM begins sometime after knowledge is produced. Ergo, the purpose of KM is not to enhance knowledge production; rather, the purpose of KM is to enhance the deployment of knowledge into practice (i.e., by taking steps to diffuse it throughout an organization and into the minds of individuals and groups who need it). This is a view of KM that we shall call 'first-generation KM' – a view that places its emphasis not on knowledge production, but on knowledge integration. While practitioners of first-generation KM tend to begin with the rather convenient assumption that valuable knowledge already exists, practitioners of second generation KM do not. Instead, they – or we – take the position that knowledge is something that we produce in human social systems, and that we do so through individual and shared processes that have regularity to them. We can describe this process at an organizational level in the form of what is now being referred to as the knowledge life cycle, or KLC (see Figure 3.6). This is perhaps the single most important foundation of second-generation thinking, since most of what we do in KM, according to this view, is designed to have impact on the KLC. If it doesn't have impact on the KLC, or if it is not intended to have impact on the KLC, then it is not KM. This is a view of KM that we shall call 'second-generation KM' – a view that places its emphasis on both knowledge production and integration.

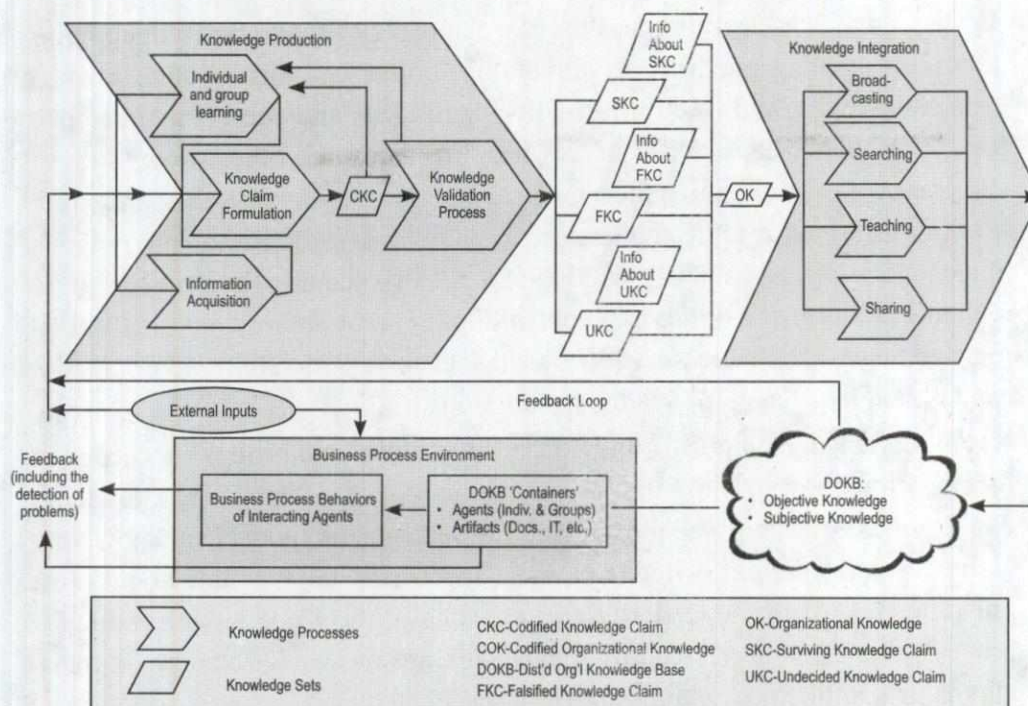


Fig. 3.6: The Knowledge Life Cycle and Business Process Environment

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The KLC shown in Fig. 3.6, and referred to variously throughout the remainder of this book, was conceived of, and developed by, a handful of active members at the Knowledge Management Consortium International (KMCI), especially by Joseph M. Firestone and myself. In presenting this model, we often take care to point out that the KLC is actually not a 'model,' but is a 'framework,' instead. What we mean by this is that the KLC can be thought of as a framework for placing models in context, in which many different competing views of how knowledge is produced and integrated in organizations can be organized and positioned relative to one another in a coherent way. Moreover, management strategies and programs for enhancing knowledge production, diffusion, and use can be seen in context when viewed against the backdrop of the KLC. But the KLC is not just a neutral conception, or framework, of how knowledge is produced and integrated in human social systems. It does reflect a particular point of view. Some of the claims embodied in this view include the following:

- People tend to engage in learning as a result of experiencing gaps in their current and goal states. Detections of these gaps constitute the emergence of 'problems,' which involve a lack of knowledge of what actions to take in order to achieve desired outcomes.
- The detection of problems by individuals, or agents, in a system triggers learning activity which eventually leads to the formulation of 'knowledge claims.' Knowledge claims are conjectures, assertions, arguments, or theories about which potential actions might lead to desired outcomes, in ways that will close the gap between current and goal states.
- As they engage in learning and the development of new knowledge claims, individual agents sometimes co-attract one another and form groups in which they collectively, and often informally, share ideas and subject them to peer review, in the broadest sense of this term. In these and other ways, they vet and evaluate their claims to their own satisfaction. At an individual and group level, this may be as far as things need to go before being placed into practice, but at an organizational level, validation must also occur in the eyes of a wider audience, if not in the minds of a controlling group or authority structure (e.g., management). This processes of Knowledge Claim Formulation and Evaluation can be thought of as 'Knowledge Production.'
- Not all knowledge claims formulated by individuals and groups succeed at an organizational level. Those that do can be thought of as 'surviving knowledge claims'; those that don't fall into either of two categories: 'undecided knowledge claims,' or 'falsified knowledge claims.' Informational accounts about these outcomes are also produced as a consequence of the Knowledge Production process. These additional records, themselves, are knowledge claims – or meta-claims, if you like (i.e., claims about claims).

- As knowledge claims are evaluated and validated at different levels of organizational scale, attempts may be made afterwards by managers and others to share their content and value with other members of the group or organization, in which case efforts are made to integrate them into the operations of a wider population of people. This process of managed knowledge sharing and diffusion can be thought of as 'Knowledge Integration.'
- As knowledge is successfully integrated throughout an organization, it manifests itself generally in two forms: mentally held knowledge by individual or group agents (i.e., knowledge held by people in minds), or held in the form of explicit linguistic expressions in artifacts (i.e., spoken claims; or claims in documents, computer files, etc.). Here, we find the ideas of the great twentieth century philosopher Karl Popper to be useful, according to which he distinguished between 'world 2' knowledge (knowledge in minds) and 'world 3' knowledge (knowledge encoded in linguistic expressions or works of art). Popper also referred to these two forms of knowledge as 'subjective knowledge' and 'objective knowledge,' respectively. The combination of subjective and objective knowledge in an organization may be thought of as an organization's 'Distributed Organizational Knowledge Base,' or DOKB.
- In discrete form, the components of a DOKB manifest themselves in what we can think of as two kinds of 'containers': agents and artifacts. More specifically, they may take the form of beliefs or belief predispositions held in the minds of agents (individuals, teams, groups, communities, departments, divisions, etc.) – these are subjective forms of knowledge. But knowledge may also be held in the form of linguistic expressions and/or encodings in speech or in objects, such as files, documents, computer systems, microfilm, disks, videos, tapes, books, articles, papers, essays, lectures, music, other works of art, etc. – these are objective forms of knowledge, which we can also refer to as 'knowledge claims.'
- The knowledge life cycle, strictly speaking, begins with the detection of problems by agents in the context of business processing (i.e., while they are engaged in the practice of instrumental behavior, such as business processes, and as they experience gaps in their knowledge of how to move from current states to goal states), and ends with the choice of newly validated knowledge claims, beliefs, and belief predispositions in the DOKB and its containers. Knowledge use, which later follows, occurs within the context of business processing, not knowledge processing, and it is in the midst of knowledge use in business processing, in turn, that new problems arise and are detected. In Fig. 3.7 we show the relationships between the KLC (aka, the Knowledge Processing Environment) and the Business Processing Environment – the two realms of processing do indeed connect and interact with one another. These and other claims, discussed variously below, comprise the theoretical foundations

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of second-generation KM. Of particular importance is the view that valuable knowledge does not simply exist. In fact we produce it, and we produce it as a consequence of engaging in knowledge processes that have regularity to them. Once we learn to recognize and expect this regularity, we can then have impact on an organization's capacity to produce and integrate knowledge by making a range of interventions aimed at supporting, strengthening, and reinforcing related patterns of behavior. This, then, is the fundamental outlook held by practitioners of second-generation KM, and the KLC is their most important touchstone.

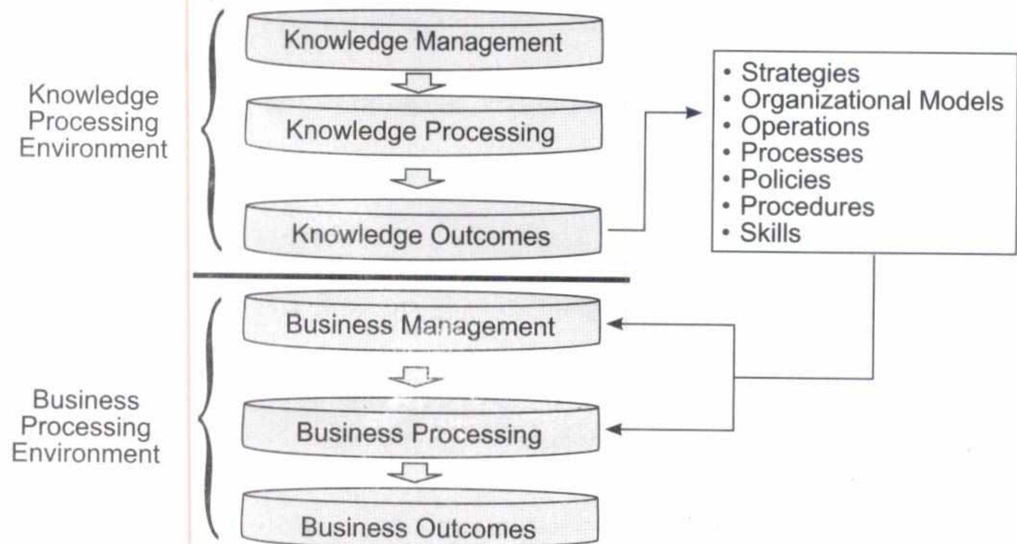


Fig. 3.7: The Relationship between Knowledge Processing and Business Processing

Check Your Progress

Fill in the Blanks

4. .... 'collect all relevant knowledge and experience in the firm and make it available whenever and wherever it is needed to support business processes and management decisions'.
5. .... are usually moderate to acquire the hardware, develop internal software or license software from 3rd party suppliers, and to train employees to utilize the system effectively.
6. By definition a .... consists of numerous independent parts, usually called "agents," which are constantly undergoing simultaneous non-linear interactions with one other.
7. A .... has a culture that supports learning and innovations both by individuals and by the organization itself.

3.12 SUMMARY

- A good knowledge management strategy is closely aligned with the organisation's overall strategy and objectives. In choosing the best knowledge management strategy, an enterprise must take into account the available resources, including the software and human resources that can be dedicated full-time to a knowledge management function.
- Once a theoretical model for managing knowledge within a given organisation has been developed an implementation strategy needs to be put in place. The implementation strategy will develop practical policies and guidelines.
- Different organizations have tried various knowledge capture incentives, including making content submission mandatory and incorporating rewards into performance measurement plans.

- Knowledge Management requires technologies to support the new strategies, processes, methods and techniques to better create, disseminate, share and apply the best knowledge, anytime and anyplace, across the team, across teams, across the organisation and across several organisations, especially its clients, customers, partners, suppliers and other key stakeholders.
- Knowledge management systems 'collect all relevant knowledge and experience in the firm and make it available whenever and wherever it is needed to support business processes and management decisions'.
- Certain factors or concerns also need to be considered in order to make this firm's investment in Knowledge Management Systems (KMS) worthwhile.
- DECs use previously existing individual-level knowledge to arrive at decisions and actions. Personal knowledge is always the immediate precursor to action.
- By definition a Complex Adaptive System (CAS) consists of numerous independent parts, usually called "agents," which are constantly undergoing simultaneous non-linear interactions with one other (Holland 1992; 184).
- A Learning Organization has a culture that supports learning and innovations both by individuals and by the organization itself. The environment promotes a culture of learning, a community of learners, and it ensures that individual learning enriches and enhances the organization as a whole.

3.13 KEY TERMS

- **Knowledge management strategy:** A knowledge management strategy is simply a plan that describes how an organisation will manage its knowledge better for the benefit of that organisation and its stakeholders.
- **Organisational culture:** Organisational culture embodies the norms and beliefs that guide the behaviour of the organisations members and is an important enabler of KM in an organisation.
- **Organisational structure:** Organisational structure characterised by a strong hierarchy can dictate and limit interaction and set barriers for knowledge transfer, especially between leadership, management and business units within an organisation.

3.14 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Knowledge is a dynamic combination of experience, expert insight, values and contextual information. It can be intangible, personal, elusive, and immeasurable (Gorelick, 2005).

2. A knowledge management strategy is simply a plan that describes how an organisation will manage its knowledge better for the benefit of that organisation and its stakeholders.
3. Organisational culture embodies the norms and beliefs that guide the behaviour of the organisations members and is an important enabler of KM in an organisation.
4. Knowledge management systems.
5. Implementation costs.
6. Complex Adaptive System (CAS).
7. Learning Organization.

3.15 QUESTIONS AND EXERCISES

Short Answer Questions

1. Define KM strategies.
2. What are the push and pull strategies of KM?
3. What do you mean by knowledge management infrastructure?
4. Define organizational culture.
5. What are the key benefits of developing KM strategies?
6. What are the key motivations for KM?
7. What are the knowledge portals?

Long Answer Questions

1. Define knowledge. Discuss the framework of developing KM strategies.
2. What are the key KM strategies?
3. Discuss the role technology in KM.
4. Write a note on KM system.
5. Discuss the KM reflecting in DEC, CAS, LO and DOKB.
6. What do you mean by knowledge life cycle and business process environment?

UNIT 4 CONCEPTUAL EXPLORATION OF CHANGE MANAGEMENT

NOTES

Structure

4.0 INTRODUCTION

The business landscape of the 21st century is characterized by rapid change brought about due to technological, economic, political and social changes. It is no longer the case that the managers and employees of firms in this decade can look forward to more of the same every year. In fact, the pace of change is so rapid and the degree of obsolescence if organizations resist change is so brutal that the only way out for many firms is to change or perish. In this context, it becomes critical that organizations develop the capabilities to adapt and steer change in their advantage.

The role of senior managers becomes crucial in driving through change and ensuring that firms are well placed with respect to their competitors. However, it is the case that in many organizations, senior managers actively resist change and in fact thwart change initiatives due to a variety of reasons which would be explored in subsequent sections. This essay examines the barriers to change by senior managers and discusses approaches to mitigate such resistance. The essay begins with a discussion of the role of senior managers as barriers to change and then outlines some approaches on how to get the senior managers on board for change.

It goes without saying that "he who rejects change is the architect of decay and the only human institution that rejects progress is the cemetery." With this axiom in mind, it is critical to understand that unless change is actively embraced, organizations in the 21st century risk obsolescence.

To resist change is as basic as human nature and hence the change managers must adopt an inclusive approach that considers the personality clashes and the ego tussles. It is often the case that in large organizations, there tend to be power centres and fiefdoms and hence the issue of organizational change must address the group dynamics as well as the individual behavioural characteristics.

Only by an understanding of the means by which managers can be brought on board can there be a foundation for suitable approaches. The approaches include a combination of pressure tactics and coordination instead of competition and cooption as well as cooperation. Change agents must realize that wherever possible, they must deal with consensual decision-making and if that is not possible, they must walk the talk and be firm in their approach. Managers at all levels have a tendency to resist change and in the high stakes game of change management, it is the ones that can articulate and communicate the change in a clear and coherent manner who succeed.

In conclusion, change is the only constant in business and the landscape of the 21st century is littered with companies that have not adapted to the changing times. Hence, organizations must and should embrace change and the approaches discussed in this paper are part of the solution.

4.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the meaning, nature and types of change management,
- Prepare change programmes,
- Discuss change as growth, as turnaround and as transformation,
- State the meaning of value-based change, change saturation and change resistance.

4.2 MEANING, NATURE AND TYPES OF CHANGE MANAGEMENT

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Change management is a defined, standardized process used in the information technology service management to coordinate and control all changes made to an existing, production technical solution.

Each organization can create their own change management process, based on the companies' relative size and staff resources. Change management is typically the responsibility of the information technology department head or manager. There are standard functions and processes utilized throughout most businesses surrounding change management.

The standard process is a method of systematically recording all proposed changes to a production or live system, completing a cost/benefit analysis, evaluating the impact and risks, creating a business case or justification for the request and obtaining approval from the business process owner. Once approved, change management includes the actual implementation of this change, along with monitoring of impact, creation of a summary report and updating the status of the change request in a broader tracking system.

The purpose of a change management process is to have a systematic method of evaluating change requests, prioritizing, scheduling resources for implementation and the appropriate level of support. Within this structure, the system manager is responsible for ensuring the best possible use of staff, equipment and resources to meet the demands of users. The change management process covers all changes for hardware, software, support documentation and procedures.

In the words of Lisa Kudray and Brain Kleuiet in the article "Global trends in Managing Change":

"Change Management is defined as the continuous process aligning an organisation with its market place ... and doing it more responsively and effectively than its competitors."

Change management can also be defined as the effective management of a business change such that organisational leaders, managers and employees work in concert to successfully implement the needed technology or organisational changes. Change management could be organisational or individual.

4.2.1 Nature of Change Management

"Change is the only constant" is a well known premise. Over the past few decades large-scale change has become a norm in organisational life. The organisations no longer have a choice, they must change to survive. The need for change is increasing, the capability to change is becoming essential for organisations to survive and succeed in future.

Rapid advancements in technology and globalisation of trade have given momentum to change. This momentum of change is not going to decelerate. However, a look at the intimidating rate of change into a technology-driven world, that has affected all spheres of life in the past decades, is more than enough to give a picture of the ever accelerating drive onwards. As the speed of change continues to increase and affect all the sectors of life, change management is a fundamental competence needed to manage the change in organisations. Thus in the present scenario managing change has assumed lot of significance. As change must be aimed at ensuring organisational survival, whether the economy is strengthening or weakening, the consequences of change being uncertain, proper management of change becomes even more vital. The term change management can be defined in simplest words as the task of managing change. Thus change management is about change to realise business results and managing change involves the process of making changes in a well planned, systematic manner.

Organisational Change Management

Organisational change management is the management of change from the perspective of the top leadership looking down into the organisation. It focuses on the broad change management practices and skills to help the organisation comprehend, accept and support the required changes. It provides the knowledge and skill to implement proper methodology for managing a change throughout an organisation. Organisational change management involves top level and middle level managers and the human resource managers who sponsor the change in the organisation.

Individual Change Management

Individual change management is the management of change from the perspective of the employees who are at the bottom level. These are the people who actually implement the change. In this the focus is on empowering them by providing them the tools and required training to help them in navigating their way through the change process. For an effective individual change management, various tools and techniques are employed to help an employee transition through the change process.

Principles of Effective Change Management

Managing the changes in an organization requires a broad set of skills like political skills, analytical skills, people skills, system skills, and business skills. Having good analytical skills will make you a good change agent. You should evaluate the financial and political impacts of the changes that can take place. You should know that following a particular process at that instant would fetch you immediate financial effects and start that process so that the change process is noted by the management. The workflow has to be changed in such a manner to reflect the financial changes that are taking place. Operations and systems in the organization should be reconfigured in such a manner that you get the desired financial impact.

Successful management improvement efforts require the active involvement of managers and staff throughout the organization to provide ideas for improvements and supply the energy and expertise needed to implement changes. Employees at all levels of high-performing organizations participate in–and have a stake in–improving operational and program performance to achieve results. Our work has shown that high-performing organizations use a number of strategies and techniques to effectively involve employees, including (1) fostering a performance-oriented culture, (2) working to develop a consensus with unions on goals and strategies, (3) providing the training that staff need to work effectively, and (4) devolving authority while focusing accountability on results. Employees in high-performing organizations understand the importance of and the connection between their performance and the organization's success. The failure to constructively involve staff in an organization's improvement efforts means running the risk that the changes will be more difficult and protracted than necessary (Becher, 1989).

The various steps for a successful organizational change in any business organization can be carried out through the following steps:

Form the coalition

Once we create the commitment of what we want to our vision to be, the second step is to form a coalition of all stakeholders. It's not only your senior management, but it is everyone that is involved with your company as well. You must include both internal and external members of your organization. Because we work as a turnkey asset management provider to independent financial advisors, we needed their agreement to this commitment if we were going to move forward successfully.

Don't underestimate the time you will need to form your coalition. All of us react negatively to change initially. We all need time to digest and understand "what's in it for me." Each of your stakeholders will be hearing it for the first time. You need to allow them time and provide them with information to reach their own conclusion that it is not only in the firm's best interest, but also in their own interest to help make this commitment a reality.

Envision the future

Paint a picture of what the firm is going to look like when this journey and transformation are complete. Many individuals who are part of your team will have difficulty understanding what the changes you are attempting to incorporate into the business really mean. They are going to ask how the change is going to affect the company and, more importantly, each individual within the company.

We showed how, by offering these services, we would be able to grow significantly faster while providing our clients with a much higher value service, and that this would create more opportunities for each of our stakeholders. At the same time, if we didn't change, we were going to fall behind in the industry, leaving fewer opportunities for employees, becoming a less important partner in our financial

advisors' growth, and not doing all that we could in assisting our investors to achieve their financial goals. It was not a very tough decision for our stakeholders once they had the information and time to confirm our vision (Aldrich, 1999).

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How do you see your future? Use your imagination to visualize what you would like your firm to be in five years. Share this vision with your group. Visualization will help guide you to the commitment that you will need to make to build the firm you want. It will also help your stakeholders assist you if they share your vision of the future. Very few great things in life are every created by a single individual, so allow your team to share in creating your new company with you.

Begin the transformation

To begin, put together a step-by-step action plan with dates, milestones, and who's responsible for the achievement of each. It easier to paint a picture of your future than it is to get started creating it. However, it is empowering to reduce the steps necessary to create the future into manageable steps. Let's say that five years out you want to triple your asset under management while providing your clients with continuously improved private client services. By the fifth year, you want to deliver services that rivals what private banks offer. For many this commitment might be overwhelming. But if you break down all the steps you need to take by month, it can easily become a reality (Argyris, 1999).

Successful change is a real challenge because no one reacts well to change except the person that is driving it. When change comes, we all tend to immediately put our hands up and try to figure out how to avoid it. Behaviorists tell us that 80 percent of us are reactive thinkers who will do anything to avoid change. Twenty percent of us are creative thinkers, meaning we initially try to avoid the change, but then examine and judge whether it's a good change or a bad change. If we think it is a good change we will incorporate it into our lives. If creative thinkers believe it is a change for the worse, they will just figure out ways to go around it.

The only way to ensure that change occurs smoothly is to have a roadmap that outlines the process that you will incorporate into your firm to make it work for your benefit.

Embed it in the culture

Everything you're doing should be consistent with the commitment. In so doing, you create a new culture. In our case, our commitment was to wealth management for private clients. We wanted to provide the best advice to private clients available in regards to their life management issues. So we had to in effect destroy our old company and create a new company that would be able to achieve the results we wanted (Becher, 1989). With every action we took, we asked ourselves if it was consistent with what we wanted to achieve. It is so easy to get side-tracked in our industry. Most of us are very tactical in our strategy so that we move from opportunity to opportunity and never give ourselves the chance to reach the next level

of success. You have to establish systems in your organization that will embed both your commitment and vision of the future in your organization. We have established meetings where each employee gets together with their team leader and the team leaders get together with senior management to make sure we stay on track.

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Accelerate the pace

Create a sense of urgency. It's important to recognize that most of us, in reacting to change, want to slow it down; but if we accelerate it, we can move ahead. There is no shortage of reasons for changing your firm. Help everyone see the increased competition and the need to differentiate yourself from all the other firms. Let them understand the likely outcome if you don't make the changes. Let them know that it is okay to be uncomfortable with change but that the winner in business will always be the one who most effectively adapts to the new environment. The rewards of winning are great. Asked them if they have every have been on a team that made things happen, whether in business or in sports. Many will have and will know about the excitement and the feeling of satisfaction that only a winning team can bring.

Continuously reinvent yourself

Start the journey all over again, recognize that there is no "there." There is no final destination for this journey; it's a continual process. The world is constantly changing. Think of some of the largest firms in our industry only twenty years ago that are no longer here. They stop reinventing themselves (Wenger, 1998). You owe it to all of your stakeholders to be all that you are capable of being. These seven steps will help you make it a reality.

Because it is important to start with determining the business goal, it's critical to establish organizational priorities. The business goal ideally should be quantitative and time bound, and it needs to be a legitimate focus of the business. Additionally, some may be convinced that something is the real business goal when they've really only stated a possible way to meet a goal. These are instances where the goal stated actually implies or assumes other targets (Handy, 1995). One example is employee morale, a common issue for many organizations. Plenty of organizations do an organizational climate study, a culture audit, or an employee survey and discover that employee morale is low. Senior management is then mobilized to do something about the morale problem, and that's when someone usually gets called into the office of the vice president of HR to find out that the new high-priority assignment is to improve company morale.

Clarity of purpose and terminology is an issue with any type of organizational change project, but is particularly important for knowledge management. The terms used in this realm— "knowledge," "information," "organizational learning"—are subject to varied use and interpretation. The successful knowledge management projects we found had paid attention to this issue, often by excluding some issues and concepts from their charters (Becher, 1989).

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One way high-performing organizations can enhance employee involvement and gain agreement on an organization's goals and strategies is by developing partnerships with employee unions. The U.S. Postal Service's long-standing challenges in labor-management relations illustrate the importance of having a shared set of long-term goals and strategies agreed upon by managers, employees, and unions. As we have reported, labor-management relations at the Postal Service have been characterized by disagreements that have, among other things, hampered efforts to automate some postal systems that could have resulted in savings and helped the Service reach its performance goals. Although there has been some progress, problems persist and continue to contribute to higher mail processing and delivery costs. To help the Postal Service resolve its problems, we have long recommended that the Service and its unions and management associations establish a framework agreement to outline common goals. We have also noted that the Results Act can provide an effective framework for union and management representatives to discuss and agree upon goals and strategies (Watkins, 1993).

High-performing organizations also seek to involve and engage employees by devolving authority to lower levels of the organization. Employees are more likely to support changes when they have the necessary amount of authority and flexibility–along with commensurate accountability and incentives–to advance the agency's goals and improve performance. Allowing employees to bring their expertise and judgement to bear in meeting their responsibilities can help agencies capitalize on their employees' talents, leading to more effective and efficient operations and improved customer service.

4.2.2 Types of Change

There are different kinds of change that an organization might undertake or be forced to undertake because of internal and external factors. The internal factors for change include reorganization and restructuring to meet the challenges of the future and also to act proactively to initiate change as a means of staying ahead of the competition. The external factors include change that is forced upon the organization because of falling revenues, changing market conditions and the need to adapt to the ever-changing business landscape.

Change can be organic which means that it evolves slowly and is like meandering up the gentle slope of a mountain. In this case, the organization and the management have enough time to prepare for change and reorient themselves accordingly. This is the kind of change that is adaptive meaning that firms have the opportunity to adapt themselves to the change.

Change can be radical which is rapid, sudden and uncertain. This is the kind of change that is disruptive and often forces organizations to reorient themselves without adequate notice and warning. It is better for organizations to anticipate change rather than be forced into accepting change that is rapid and sudden.

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We have seen how managers at different levels resist change and how this resistance manifests itself. Apart from the ideological and personality issues, there is the very real possibility of change being resisted because the "visibility" of what comes next is not clear. For instance, many managers tend to resist change because the change initiators have not clearly spelt out the outcomes of the changes and the possible impacts that such changes have on the organization. This is the realm of the "known unknowns" and the "unknown unknowns" which arise because of ambiguity, complexity and uncertainty. Hence, the resistance to change can come about due to the lack of coherence in the vision and mission and because the change is not clearly communicated as well.

Carson (1998) has mentioned three kinds of change:

(i) *Adaptive change:* This involves reimplementation of a change in the same organisational unit. Adaptive change is not considered threatening

(ii) *Innovative change:* This involves changes that are generally new and unfamiliar. The innovative changes create a kind of uncertainty and fear in organisations

(iii) *Radically innovative change:* This is the most intimidating type of change. This type of change is most resisted in organisations. Implementation of a radical change in an organisation requires a long-term strategy

Changes in organisations can also be categorised as:

- **Reactive change:** This is change brought about by a sudden or unplanned event.
- **Planned change:** This is a systematic, deliberate change in the way part or all of an organisation functions. In planned change the focus is on processes, people, or technology; and one person, a project team, a department, or the entire firm can be involved in the change process.

4.3 AREAS OF CHANGES IN BUSINESS

Against the background of some personal experience of change, and to help you place your own change experiences into categories from which something can be learnt for the future, we now attempt to list some of the areas in which change arises and to bring some classification to bear. However, you classify change, the various headings you come up with are interrelated. We would suggest that the main headings under which you could probably place business change experiences are:

- Markets changes
- Technological changes
- Organizational changes

Market Changes

The market changes, customers want more or less of goods or services, competitors have begun to get ahead in the race, government decisions have freed you or constrained you, world events have changed the nature of people's expectations, price mechanisms nationally or internationally have got out of kilter, new technology has superseded what your organization was good at, political changes in other countries open up opportunities or closely entry, and raw material shortages have arisen or their prices have shot up. All these create specific changes in your business, whatever it is.

Technological Changes

The changes in the market place give rise to specific happenings in the company. If the signs are negative, there will be new urgency in the search for new products or the creation of new expectations from old ones. There will be the introduction of new technology, if it can be found, in order to re-establish price advantage, quality pre-eminence or diversification into new products. There will be the decision to explore areas of the globe where you are not previously represented.

Organizational Changes

These responses to the market place will affect the organization. At worst there will be retrenchment, reduction in the number of employees, and reduction in the number of levels of management. The technology itself might require new styles of organization, new skills and the upgrading of old ones. The number of operating sites may be reduced. People may find themselves performing totally new functions, which they may like at least to start with. The only way to stay in business ıay be a merger or to be the subject of a takeover, friendly or hostile. With such ownership change other market, technological and organizational changes may follow. In some industries it is an endless cycle.

A few different types of organization level changes are:

- **Strategic change:** Strategic change is the change in the very basic objectives or mission of the organization. A simple objective may have to be changed to multiple objectives. For example, a lot of Indian companies are being modified to accommodate various aspects of global culture brought in by the multinational or transnational corporations.
- **Structural change:** Organizational structure is the pattern of relationships among various positions and among various position holders. Structural change involves changing the internal structure of the organization. This change may be in the whole set of relationships, work assignments and authority structure. Change in organization structure is required because old relationships and interactions no longer remain valid and useful in the changed circumstances.

- **Process-oriented change:** These changes relate to the recent technological developments, information processing and automation. This will involve replacing or retraining personnel, heavy capital equipment investment and operational changes. All this will affect the organizational culture and as a result the behaviour pattern of the individuals.
- **People-oriented change:** People-oriented changes are directed towards performance improvement, group cohesion, dedication, and loyalty to the organizations as well as developing a sense of self-actualisation among members. This can be made possible by closer interaction with employees and by special behavioural training and modification sessions.

4.4 CM AS 'UNCONSCIOUS INCOMPETENCE' TO 'CONSCIOUS COMPETENCE'

There are four states of consciousness and competence that you may pass through as you learn, as in the model below.

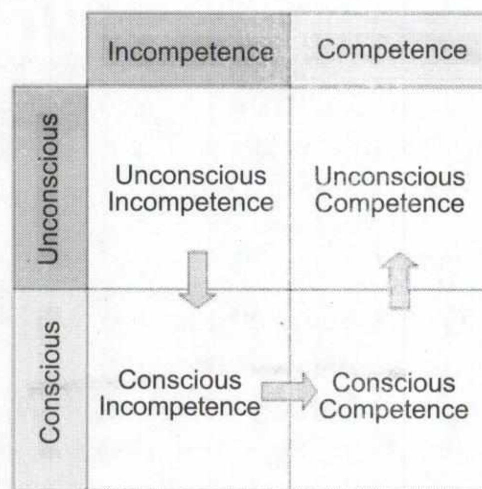


Fig. 4.1: Conscious-Competence model

Whenever we move into a situation of change there are things that we don't know (such as new skills, competencies, attitudes). Our problem is that we very possibly do not know that we don't know those things. This is called unconscious incompetence.

One of the key things that a change agent or change leader can do is to help people move from this state into a state of conscious incompetence. This is where we still do not know the new things, but now we are aware of that fact.

This awareness is essential if we are going to engage with any learning activity as part of the change programme. Those learning activities will eventually help us to gain the new skills so that we then move to conscious competence, which eventually

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becomes unconscious competence (when we no longer have to think about the skills; they are embedded).

It's making that first move that is critical. None of us likes to think that our existing skills are no longer needed and that we do not know what we need to know. But 'moving' is essential for the change to eventually take place successfully.

The role of the change agent is so important to help us over our learning anxieties as they 'raise the level' of conscious competence.

Unconscious incompetence

As an unconscious incompetent, you do not know what you do not know. You lack knowledge and skills in the area in question and are unaware of this lack.

In this state, where you can exist for a very long time, you are not as competent as:

- You think you are
- You actually could be
- Other, more competent people

In this state, you may be in one of two positions. Ignorance is bliss, as they say, and you may well be happily naive, not realizing that you are not competent.

You also may be in a faking state, where you believe you are competent, and either do not realize that you are in this state or are covering up your incompetence (in which state you may be in the next stage).

Conscious incompetence

As a conscious incompetent, you realize that you are not as expert as perhaps you thought you were or thought you could be.

The transition to this state from being unconsciously incompetent can be a shocking and sudden realization, for example when you meet others who are clearly more competent than you, or when a friend holds up a metaphorical mirror to your real ability.

You can also exist in this state for a long time, depending on factors such as your determination to learn and the real extent to which you accept your incompetence.

Conscious competence

Becoming consciously competent often takes a while, as you steadily learn about the new area, either through experience or more formal learning. This process can go in fits and starts as you learn, forget, plateau and start anew.

The more complex the new area and the less talent you have for it, the longer this will take. The good news is that many people have achieved remarkable feats of learning through sheer persistence.

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Unconscious competence

Eventually you reach a point where you no longer have to think about what you are doing, and are competent without the significant effort that characterizes the state of conscious competence.

Howell (1982) describes the four stages succinctly thus:

"Unconscious incompetence – this is the stage where you are not even aware that you do not have a particular competence. Conscious incompetence – this is when you know that you want to learn how to do something but you are incompetent at doing it. Conscious competence – this is when you can achieve this particular task but you are very conscious about everything you do. Unconscious competence – this is when you finally master it and you do not even think about what you have such as when you have learned to ride a bike very successfully"

-- (Howell, 1982, p.29-33)

4.5 CHANGE MANAGEMENT PROGRAM

A change management program is a structured system companies use to adjust or alter their operations. Companies can undergo change for a number of reasons, driven by forces internal and external to the company. Using a program allows a company to approach change with a previously successful process. This can alleviate any resistance associated to the change management process. Most companies will have change management programs built around their operations, although a few standard principles exist in all systems.

When developing a change management system, companies must decide the type of change needed to take place. For example, changes may be strategic, technological, or structural, or they may center on employee behavior and attitudes. Strategic change focuses on an organizational-wide shift. This may result in a change in production operations or goods and services produced adjustments to the number of competitors in the economic market or the result of changes in a country's fiscal or monetary policies. Technological is the use or upgrade of computer-based systems in the company. Structural changes are internal, focusing on the responsibilities of individuals inside the company and how individuals report to the company's management team. Employee behavior can be setting a code of conduct or ethics, training workers how to handle customer service complaints or a number of other situations that may arise in the business environment.

Many organizations take the help of external consultants in identifying, recommending and implementing change. If we look at the reasons why organizations rope in external consultants like McKinsey, BCG and Booze Allen group (among others) we find that they do so mainly because they need an independent and objective perspective on what needs to be changed and how it should be achieved.

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For instance, companies like Jaguar, BP and Shell have all relied on external consultants to help them with their change management programs. And, they have been relatively successful in their efforts as can be seen in the way they have transformed themselves in the marketplace.

However, there have been notable failures as well. For instance, the Parry's group failed spectacularly in its efforts to change its business processes and outlook towards the market. Despite taking the help of external consultants, the company could not transform itself. So, what is that differentiates whether external consultants succeed or fail to help companies in their change management programs. First, there needs to be cooperation with the consultants from the entire top management and not merely the CEO or a few directors/managers. The point is that the external consultants must not fall prey to the office politics and hence the entire leadership must stand solidly behind them.

Next, there cannot be any information that is withheld from the external consultants. The key to change is that complete information about the organization and its strengths and most importantly, its flaws must be visible and so the external consultants must have the full cooperation of the people who are responsible for implementing their recommendations. In fact, one of the reasons the CEO or the Board of Directors often take the help of consultants is that they need an objective view of the situation which is unbiased and not tinted by the prejudiced perspective of politicking employees.

The other aspect that makes organizations rely on external consultants is because these consultants have experience in dealing with companies in similar industries and hence can apply their expertise and experience to recommend specific changes. However, it is the case that consultants can get too close to the management to the point where they are compromised because of their proximity to the powers that be. Some examples of this include the Arthur Anderson and Enron saga where both the consultants (Anderson Consulting) and Enron became partners in swindling the employees and the people. Closer home, the way in which PWC or Price Waterhouse Coopers was a partner to the Satyam scandal shows that there are downsides to having consultants guide the companies.

In conclusion, consultants bring a fresh perspective to dealing with organizational issues and hence are vital to the change management program. However, there is a need to observe professional rules of conduct and there must be ethical behavior from both sides of the equation.

4.6 CHANGE LEVERS

To maximise the chances of achieving effective change there are 5 levers of change that must be addressed. Missing just one will allow the chances of success to decrease dramatically.

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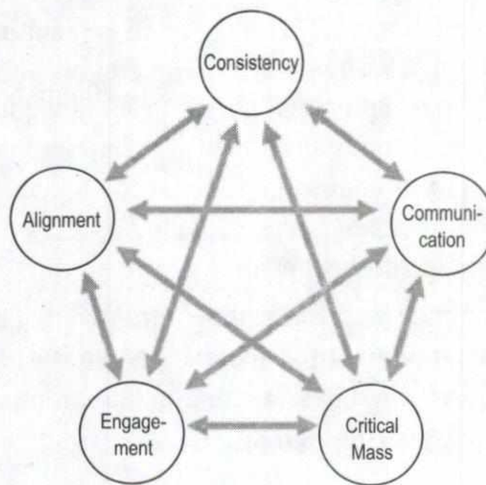


Fig. 4.2: Levers of Change

Consistency

This is a fundamental key to change leadership, embedding values and the management of behaviours and actions to create effective change. Consistency in what is said and done creates trust and confidence. It provides the safety and certainty in which to operate, explore and engage, in line with the business needs. By providing consistency of message and alignment of systems and processes, you allow people to make their contribution within boundaries which support a flexible but focused organisation.

Alignment

The alignment of the strategic change to the systems, processes, policies and procedures is essential. The strategy starts at the top and alignment must be clear in the cascade. How do individuals and teams contribute to the overall strategy, what is our own strategy and what do we need to do to achieve it in line with our values and vision? How will we cascade it down in our sub areas to ensure consistency and alignment? These are the challenges all leaders and managers will face and an area where we can help. Gaining alignment creates energy and focus.

Communication

Communication is the effective combination of face-to-face, informal and formal channels in the organisation. It includes top-down/bottom-up, internal/external, written, verbal and electronic channels. Issues to consider include, time, speed, information content, context, knowledge, control and feedback.

It also includes the stories, legends, reputation and values of the business, making it what it is today and how it will be in the future. We will help you consider the most effective communication strategy to create impact and inspire your people.

Critical Mass

To create change of a certain scale it is necessary to embrace the energy in the whole system. Change operating in isolation will not bring about the full benefits and added value. Without engagement, change can be seen as being 'imposed' and 'done to me'. Engagement enables people to contribute their ideas, experience and knowledge. They are able to validate the change and become supporters and advocates of it, which encourages ownership and responsibility.

Sometimes the difference between having or not having a critical mass can be determined by only a small number of influential people. Just before a critical mass is reached, there is often informed pessimism and maximum resistance to change. Critical mass supports the break through.

Emotion

Active management of 'hopes and fears', 'anxiety and curiosity' is critical for successful change. Change is in the organisation, transition is in the mind of people. Transition is much more difficult than change – without transition there is no change.

4.7 CHANGES AS GROWTH

Our journey through life involves a series of changes - some major and many minor. Even though change has always been a part of life it seems that change is happening faster than ever before. This is especially evident in the workplace. Competition in a global marketplace, technological advances, changing demographics, and the speed of information transfer are just some of the influences that have had a dramatic impact on how organizations operate. Day-to-day work life is commonly filled with policy and procedure changes, shifting responsibilities, and expanding workloads. At the same time, our personal lives are often marked by competing demands and priorities.

Being able to adapt and respond effectively in a constantly changing world has become a necessary skill. And one that we can enhance and develop when we understand what goes on at a personal level when we are faced with change.

How we respond to change is a funny thing. There are times when we go out of our way to initiate change in our lives. For example, we may move house, city or country; change jobs or go back to school. Although we may be apprehensive about such changes, we are stimulated by the possibilities and opportunities that will emerge. When we initiate the change, we are likely to define the experience as exciting. On the other hand, these same changes might be imposed on us by circumstance, or the design of another person or our workplace. When change is imposed on us, our experience of the change is likely to be quite different. In these situations, we may feel threatened and fearful about the change, and focus heavily

on negative outcomes. We may want little to do with the change and find ourselves resisting it fiercely.

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Moving From Resistance to Acceptance

When we resist change, we knowingly or unknowingly behave in ways that attempt to keep things 'the way they were'. Our attitudes and actions are not aligned with the new directions and we are likely to feel discomfort or tension as a result. To help ourselves move from resistance to acceptance, it can be useful to understand that there are varied reasons why people may resist or struggle with change, it isn't simply because we think the old way is better.

When we find ourselves resisting or struggling with change, the first step is to ask ourselves WHY?

It May be Because, We Are Creatures of Habit

Being able to do things the same way provides us with a large element of predictability, stability, and comfort in our lives. When it comes to our responsibilities at work, once we have done things the same way for a certain length of time, we end up getting quite good at what we do. This degree of competence contributes to our sense of value or worth. When we are asked to make changes that impact how we do our job, our sense of comfort and competence becomes disrupted. We may at times feel insecure about our abilities.

It is important to recognize that it is natural to feel out of sorts and frustrated from time-to-time when we are embarking in new directions. Doing things differently takes effort and the course is never really clear. It's important to ask ourselves what knowledge or skills we may be lacking and to seek these out. We may also benefit from making a goal that relates to doing our personal best within a changing environment, acknowledging that things will not go smoothly all of the times.

It May be Because, The Change Involves a Loss

Certain life events, such as losing a loved one, involve an obvious major loss. In such circumstances we understand that people will grieve their loss. However, with other sorts of change the losses we experience are not always obvious. And with workplace change, our workload is usually so full that it is hard to imagine that we've lost anything. However, as a result of the changes, we may not have the same opportunity to connect with certain people or certain activities that we've enjoyed. These subtle changes can translate into a loss, and leave us feeling amiss and reluctant to move forward with the changes.

Making a special effort to stay connected with people that are important to us can be helpful.

Identifying those aspects of the change that represent benefits for us personally will help us get a balanced perspective and orient us positively toward the change.

It May be Because We Fear the Unknown

During periods of change, when things are uncertain and unpredictable, we may fear or worry about the unknown. We may be anxious about where we are headed, and what the future will look like. We generally have a high need for information, and yet it is common for information to be sketchy or incomplete. In the workplace, a change in one area may require decisions in another that can't always be foreseen or articulated as quickly as we would like.

There are a number of things that we can do to help ourselves adapt to uncertainty or ambiguity:

- First, ask how the change will affect our immediate situation; ask questions to clarify things that seem unclear; stay focused on the task at hand; focus on one step at a time or one day at a time. To minimize worry about what lies ahead ask yourself the question 'is there anything that I can do about this matter?'
- If yes, then identify the action to be taken. If not, acknowledge that 'I have no control over this matter' and focus on those things that you can influence.
- We can learn from our past experience of change by asking 'have I been through anything like this before?' or 'how did I get through it and what seemed to work?'

Positive Orientation Towards Change

No matter what change we are faced with in life, it will be much easier to cope with and adapt to if we hold a positive attitude about change in general. This doesn't mean that we necessarily have to agree with the circumstances or details of the change. In fact we may disagree with it, but can still adapt to it in a constructive manner.

Having a positive orientation towards change involves:

- Knowing what we can and cannot control in a given situation
- Eecognizing that disruptions are a natural response to change
- Being creative and looking for the opportunities that change creates
- Recognizing that there are a number of right ways to do things
- Utilizing our personal resources and strengths to actively do the best we can

We each have an active role to play in how we respond and adapt to change that we experience in life. Understanding this will make it much easier to take advantage of the opportunities for learning, and personal growth that do exist amidst change.

4.8 CHANGES AS TRANSFORMATION

People react to change in different ways, in what has been described by Bridges (1991) as transitioning. Bridges explains this as follows:

"Change is not the same as transition. Change is situational: the new site, the new structure, the new team, the new role, the new procedure. Transition is the psychological process people go through to come to terms with the new situation. Remember that change is external and transition is internal."–William Bridges (1991).

"Managing Change" is the name given, in common with many others, to the generalized version of the management paradigm that is taking place of "Command and Control" as the new era begins. In a world of increasing uncertainty, change is a journey without a tangible destination. We know little more about where it will take us than that, at its end. We will have to be able to go on managing change better than any of our competitors if we are to survive and prosper over the long haul. Like a nomadic tribe, the modern corporation maintains its competitive health internally by the endless renewal of its capabilities, and externally by continual migration to markets where its capabilities, old and new can sustain it. The organization, its competitors and its markets are in constant flux. The winners are those dynamically able to develop distinctive capabilities, with special value, to particular parts of the market-place. Financial performance is the measure of success at doing this at a particular point in time. Sustained financial performance is the measure of success at doing it over time, i.e. of the superior ability to change in a competitive world. Where the old management paradigm, "Command and Control" was eminently suited to a static world, the new management paradigm, "Managing Change", is the destination as well as the transition process of the transformation projects all of the world's business enterprises need to undertake and only a few have really begun.

Grand strategy is the overarching discipline that deals with defining and refining the way an organization is managed so as not just to succeed in the current period, but to maintain its competitive health into the indefinite future. When faced with massive change in multiple aspects of the competitive environment the steady, continuous refinement of an organization's management paradigm that typifies the leadership task in stable times, will no longer suffice. Now the very assumptions on which the paradigm rests are changing. Now something more dramatic, more discontinuous, more far reaching is needed. This "something" is transformation – of the way the organization is managed, of its business processes, of the behaviour of its people, of its use of information technology, of the way it treats all its stakeholders and of the way it competes; in other words the development and adoption of a whole, new, grand strategy suited to a whole, new, economic order.

The shift from one economic long wave to the next is the definitional time of transformation for business. Thus the particular form that grand strategy takes in such a period is businesses transformation. It was seen how, each of previous times this has happened, there have been equally fundamental changes, first in the industries that drove the economy, and then in the business enterprise itself and the way it was managed. One more time a generation of business leaders face the challenge—to transform the way their organizations are managed, to make them the winners in a new, this time global, economy.

4.9 CHANGES AS TURNAROUND

By analyzing some of the important organizational case studies and understanding the approaches undertaken by people who were responsible for turnarounds, Khandwalla observes that:

- Turnarounds can create a rather volatile situation — they evoke images such as those of war, endangered survival, and junkyard pile.
- During a crisis the turnaround leader acts on numerous fronts. He/she articulates a credible vision and strategic intent. The CEO's job is shaping the concept and the structure by which the concept would be implemented across the board, and often dramatically (boom; strike; crash). He/she becomes a bridge to various stakeholders to rope them into the turnaround. The CEO tackles the immediate cash or other crises on the war footing. He/she imposes a philosophy (Do it now!'), sometimes by crying a credible wolf (The leader's job is to help everyone see that the platform is burning). The CEO keeps up the energy of people by personal example (work harder than anybody else, seven days a week, 24 hours a day). To be able to do this one needs energy, purposiveness, versatility and loads of infectious motivation and optimism in a scenario of despair. As *Business Week* put it, 'Turnaround artists have uncommon stamina, a thirst for action, and some of the biggest egos in business'.
- The turnaround leader often simplifies the immensely complicated turnaround task to get the organization moving ('fix it, sell it, or shoot it'; improve corporate image, and that's it; VERC: volume, earning, returns, cash; 'businesses don't fail, people do'). But at the same time he/she reserves flexibility ('one pill cannot kill all ailments; strategies are simple, their execution is not').
- The turnaround leader asks some tough questions that can shatter preconceptions (what's strategic, what's diseases, what's underperforming). To get answers he/ she needs to circulate among the workers (how could we achieve 20-20-20). He/ she needs to break up big problems into smaller manageable ones, and scrape away the encrustations to get to the core of problems.
- The turnaround leader often has to take risky actions that can go either way.
- The turnaround leader has to discriminate between what is good for the organization and good for employees, especially the non-performing ones. He/she cannot afford to be soft and sentimental but he/she need not be callous either. Some turnaround leaders may, however, use separations or punishments to send a message to the rest ('if you can't get under the limbo rack, good-bye'; 'public hangings' of change resisters). Others may move those that can deliver into strategic positions.
- The turnaround leader acts authoritarian on the assumption that people like dependency ('A lot of people want to be led'; 'People need to be told here's where we are going and why').

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- The turnaround leader has to manage the anxiety and insecurity of the staff, and turn them into constructive action through straight talk, consultation, credible plan of action, incentives, decisiveness, tolerance for honest mistakes and new skills.
- The turnaround leader has to co-opt the doubters, the indifferent, even the adversaries, into a team inspired by a common purpose (sing from the same song sheet).
- The turnaround leader has to empower people down the line to take decisions.

4.10 VALUE-BASED CHANGES

"Change must occur at the emotional level – the same place where resistance to change usually occurs." (Brill and Worth 1997, p.50)

Brill and Worth's important and insightful book, *The Four Levers of Corporate Change* (1997), illustrates the similarities in motivating individual, personal behaviour change and effecting change on a larger scale in an organisation, comprised of individuals.

In the 1980s there was a growing awareness of the cultural component of organisations: that organisations were more than a profit/loss process and that organisational culture is comprised of "a collection of fundamental values and belief systems which give meaning to organisations." (Wallace et al. 1999, p.4) Successful companies are more likely to be aware of that cultural component and engaged with it. (Branson 2008, p.1) The congruence of personal and organisational values can determine an individual's satisfaction as an employee as well as acceptance of organisational change. (Wallace et al. 1999, p.5) (Kelly 2000, p.3) As with some of the literature on individual behaviour change and values, there is an assumption in the organisational literature that individuals might need to change their values or accept that their values are different than those of the organisation; rather than a starting point that a universal set of values is held by all, but prioritised differently.

The assertion of a universal set of values is important not only for motivating individual behaviour change, but also for implementing change within organisations, again, comprised of individuals.

Kelly posits that organisational leaders are the source of organisational values, communicating their own personal values and that when a manager is perceived as credible and honest, employees are more likely to be aligned with organisational values (Kelly 2000, pp.4, 6). Further, flexible, adaptable organisations will need to align organisational values to those values held by their employees to cope with the demands of the 21st century according to Branson. (2008, p.1)

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4.11 MAPPING CHANGE

Managing the portfolio of change requires someone to take a step back and evaluate the various change efforts and cumulative impacts in the organization. When organizations are introducing large amounts of change, rarely does someone step back and evaluate the collective impact those changes are having. Senior leaders know what initiatives they have invested in, but they do not see how those change efforts impact employees. Project teams focus on delivering the best solution they can for the opportunity or issue they have been handed, but they do not see how their work interacts with other change efforts. Front-line employees and managers are often the ones who feel the brunt of change saturation, but they rarely have any recourse.

The time has come for organizations to take seriously the entire portfolio of change impacting employees and workgroups. While there has been some progress made in the field of "project" portfolio management, this work is typically limited to inventorying the technical details of the formal projects impacting an organization. Prosci has developed a Change Portfolio Management Process to help organizations and leaders do a better job of understanding, evaluating and managing the portfolio of change. The image shows Prosci's Change Portfolio Management Process.

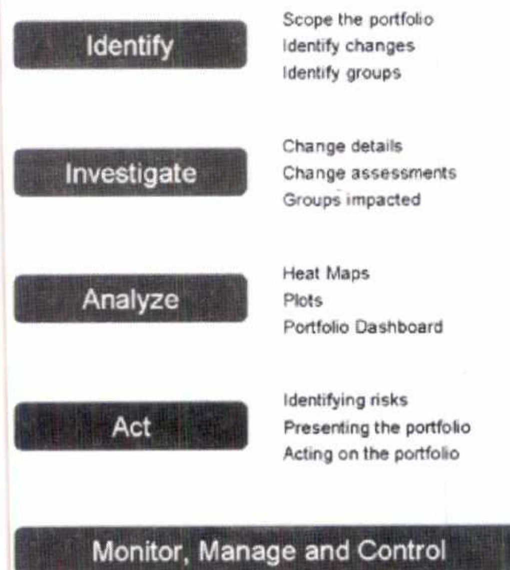


Fig. 4.3: Prosci's Change Portfolio Management Process

- **Phase 1:** *Identify* – Here the boundaries of the analysis are established. An inventory of the change efforts underway is created – both formal projects and non-project change. The different groups in the organization are segmented so change impact can be evaluated in the next step of the process.
- **Phase 2:** *Investigate* – This phase is dedicated to learning about each of the change efforts in the portfolio. A common set of data is collected about each change including the size, impact, disruptive nature, risks and health of the

initiative. This is also where the mapping of each change to the groups that are impacted by that change occurs.

- **Phase 3:** *Analyze* – In the third phase, a portfolio perspective is created. Heat maps are graphical depictions of who a change impacts. The cumulative impact of all the changes in the portfolio drives an Organizational Heat Map which shows areas of change saturation. Various other graphs are created to show the positioning of the current portfolio. Finally, a Portfolio Dashboard is created which captures high-level data and risks for the portfolio.
- **Phase 4:** *Act* – In the Act phase, the portfolio moves from an academic to a pragmatic tool. Risks are identified for specific change efforts, groups in the organization and points-in-time where there is too much disruption occurring. The portfolio is presented to senior leaders and others in the organization who will benefit from a "big picture" of the current change environment. Actions are taken to alleviate change saturation and the consequences of changes colliding.
- **Phase 5:** *Monitor, Manage and Control* – This is the final step of the Change Portfolio Management Process. Here, the portfolio becomes a management tool for evaluating new change efforts being proposed and change efforts that are concluding.

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4.12 CHANGE SATURATION

Change saturation occurs when there is so much change going on that it negatively impacts individuals and the organization. This typically occurs because no one in the organization keeps a "portfolio" view of all the change efforts underway. When a project team focuses exclusively on their particular business opportunity or challenge, they do not see how their change effort collides with other changes underway. Some Project Management Offices (PMOs) are beginning to make headway in project portfolio management, but the work here is typically limited to inventorying projects and their associated technical details, but they fail to create the necessary "portfolio" view of the collective or cumulative impact of all the changes. Given the increasing amount of change – including frequency, size and breadth of impact – organizations are often faced with "too much change".

Change saturation is a function of two variables: change capacity and change disruption. This is sort of a supply and demand function – how much change can a group or organization handle and how much change is currently happening. Think of the analogy of a bucket of water: change capacity is how large the bucket is, while change disruption is how much water is in (and being added to) the bucket. When change disruption is greater than change capacity, an organization faces change saturation.

Check Your Progress

1. Define change management.
2. What is the individual change management?
3. What do you mean by change management programme?
4. What are the grand strategies?

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Change capacity and change disruption can be broken down into the components that drive them. The picture below shows the Prosci Change Saturation Model.

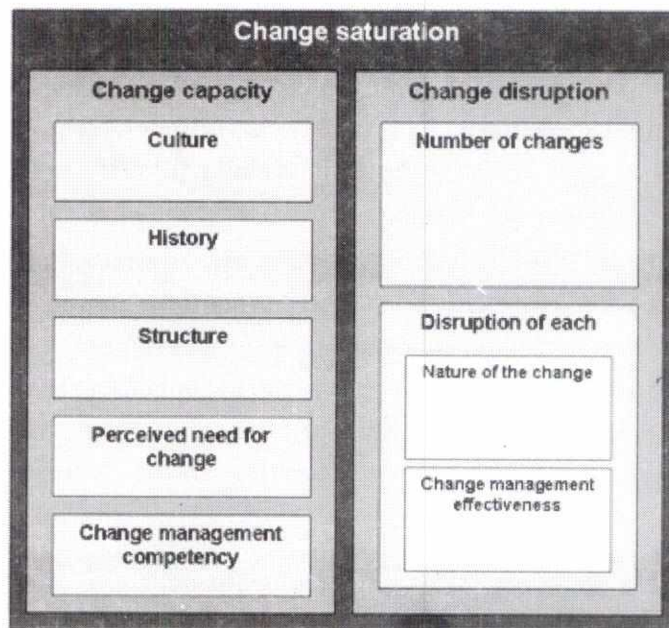


Fig. 4.4: Prosci Change Saturation Model

Change capacity is shown to be a function of: culture, history, structure, perceived need for change and change management competency. Change disruption is a function of the number of changes going on and the disruption that each one causes. The disruption a change effort creates (or, the amount of water the effort adds to the bucket) is determined by the nature of the given initiative and how effectively the people side of that change is managed. The Change Portfolio Toolkit includes a complete description of the Prosci Change Saturation Model along with worksheets to determine your saturation level.

Level of change saturation

Figure 4.4 shows the relative ranking by participants on the amount of change saturation they were currently experiencing in their organization. Over one third of participants (36%) cited being past or at the point of saturation. Just under one fifth of participants (19%) cited having a significant amount of spare capacity for change.

Symptoms of change saturation

Participants identified numerous symptoms of change saturation. Symptoms of change saturation were reported in three areas:

1. Individual behaviors exhibited in a change-saturated environment. The top three symptoms were:
   - Disengagement and apathy (some employees took the attitude of "just tell me what you want me to do")

- Frustration and increased stress
- Fatigue and burnout (employees became tired and worn out by the number of different changes happening around them)

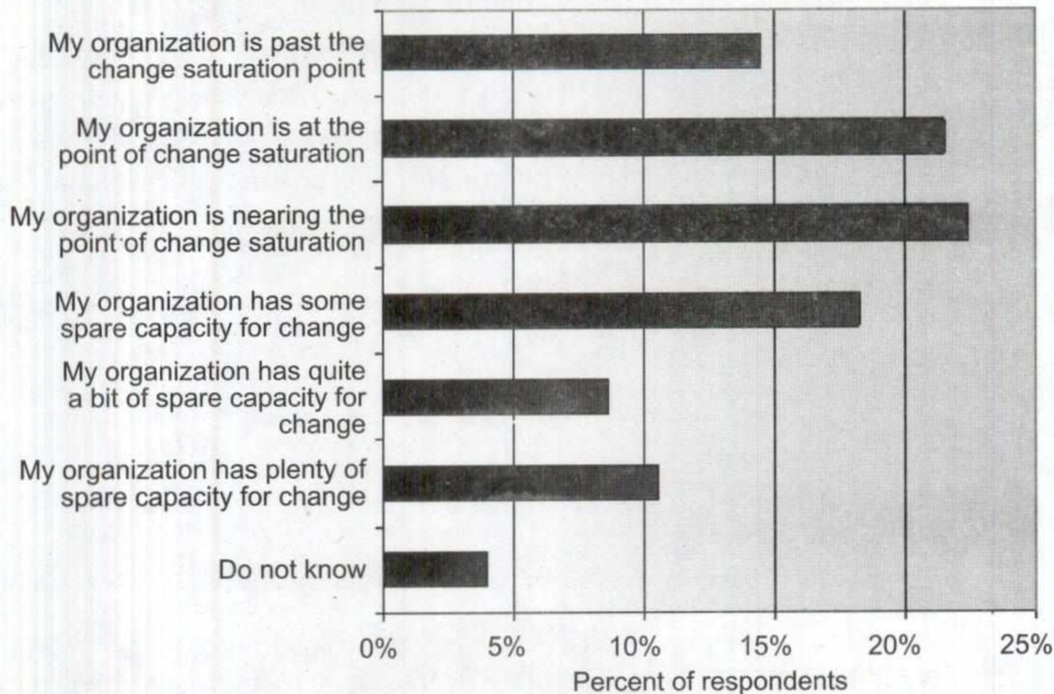


Fig. 4.5: Change Saturation Level

2. Symptoms of change saturation with projects and project teams. The top two symptoms were:
   - Changes did not realize benefits (projects failed to meet their intended objectives when taking place in a saturated environment)
   - Lack of resources (projects were being attempted without the proper resources as the organizational investment and human capital were spread too thin)
3. Organizational symptoms of a change-saturated environment. The top four symptoms were:
   - Higher turnover
   - A decline in productivity
   - Increased absenteeism
   - Loss of focus on business basics

Tactics for coping with saturation

Participants provided a number of tactics for addressing change saturation. The top two most frequently cited techniques for dealing with periods of excessive change were:

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- **Establish and communicate priorities:** By an overwhelming margin, participants commented on the need to set priorities to alleviate change saturation. Priorities should be set by senior leaders. Once priorities are established, they should be communicated to the rest of the organization.
- **Communicate effectively:** Communication should be from multiple sources in the organization. It should be frequent, consistent, focused and should show how changes fit into the strategy. Additionally, participants stated that it is important to communicate a vision of the future or the "big picture" for the organization. Communication should also include soliciting feedback.

A model for managing change saturation

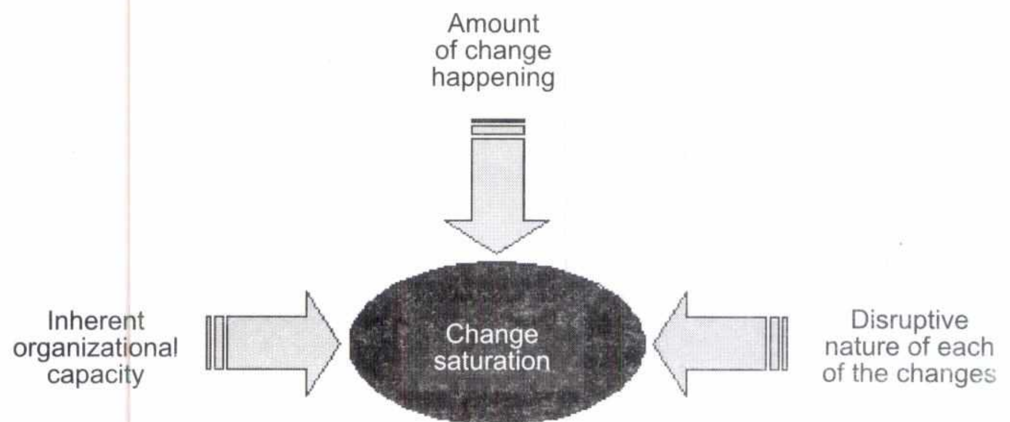


Fig. 4.6: Change Saturation Model

Table 4.1

	Defined by:	**Addressed by:**
Inherent organizational capacity	Culture History Structure Change management Competency of those in the organization responsible for implementing change (project teams, senior leaders, managers and supervisors)	Building organizational change management competency (what Prosci calls ECM - Enterprise Change Management) Building expectation that change is constant Creating track record of successful change * These are long-term solutions that fundamentally change how the organization behaves

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Amount of change happening	External market drivers - customer and competitor issues Internal opportunities or challenges Funding and resources available to implement changes	Reducing the number of initiatives Staggering or sequence changes Clearly prioritizing the changes * Many times, these alternatives are challenging given the needs of and demands on the organization
Disruptive nature of each of the changes	How well the 'people side' of each initiative is managed Groups being impacted by numerous initiatives at once	Applying solid change management processes and principles to each project Mapping and managing the 'people' impact of initiatives * These steps can be implemented immediately by project teams throughout the organization

4.13 CHANGE RESISTANCE

The main reasons for resistance to change are both individual and organization. The research document of individual and organizational behavior has found that organization groups and individuals resist change. Resistance to change provides a degree of stability and predictability to behavior, as it does not allow immediate change. If there was no resistance to change the organization will take on characteristics of chaotic randomness.

There may be reasons for resistance to change for analytical purpose, lets us categorise the causes into the following.

1. Individual Resistance.
2. Group Resistance.
3. Organizational Resistance.

1. Individual Resistance

Individual resistance arises due to differing perceptions, personalities and needs. Some of these reasons appear to be rational and emotional. These reasons are listed below.

Economic Factors

The economic reasons for the resistance to change may be the following:

- In an organization when the development or change on technology takes place, an employee resists the change. Employees may fear that the change will lead to

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technological unemployment. Generally, new technology is associated with education of labor intake and therefore they resist the change. For example, the introduction of computers in an organization means that an employee will have to learn the certain package to work efficiently. They may not be liked by some employees and they develop negative attitude towards computer and resist them.

- In an organization where pay is tied to productivity individuals usually resists change as they fear that they will not be able to perform new task effectively, thus causing a decline in productivity and a decrease in their income.
- Workers may fear that they will be demoted if they do not acquire the skills required for the new jobs.
- Workers resist the changes which lead to high standards which in turn may reduce the opportunities for bonus or incentive pay.

Habit

All human beings are creatures of habit. Individuals generally feel comfortable in the environment that they are habituated to. The modern life is very complex and no one likes to consider the full range of options for the hundreds of decisions which have to be made everyday. Instead we rely on habit or programmed responses. When confronted with change, the thought of moving away from the environment they are accustomed to becomes a source of resistance.

Insecurity

Safety and security are high priority for every individual. One of the major reasons for resistance to change is uncertainty about the impact of change, especially on the job security. When employees feel that the security of the job is threatened by change, they resist it. The fear of the unknown always has a major impact on the decision of the individual.

Lack of Communication

If the workers are given an opportunity to participate in the process of change, the resistance is likely to be less. But if the change is not properly communicated that to in an acceptable manner to the employees, it is likely to cause resistance.

Extent of Change

If there is a minor change and the change involves only the routine operations the resistance will be minimum or no resistance. But in case of major changes like reshuffling of staff will lead to major visible resistance. Similarly the process of change is slow, the resistance will be less as compared to rapid or sudden change.

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Psychological Factors

One of the major reasons for resistance can be emotional turmoil that a change may cause especially if the past experiences with the change have not been positive. The psychological reasons for the resistance to change are:

- Workers may have the fear that the new job will bring boredom and monotony as a result of specialization brought by the new technology.
- Change in technology brings new method of doing the job. New ideas of doing the job must be adopted. To learn these ideas they need to work hard and they do not want to take the trouble in learning new things.
- The workers may be incapable of understanding the implications of new ideas and methods.
- Workers may not like criticism implied in a change that the present method is inadequate and unsuitable.
- New changes may lead to reduction of the personal pride of the workers because they fear that new work changes will do away with the need for much manual work.

Social Factors

Every individual has social needs like friends, belongingness, etc. In an organization, while working employees develop social relationship with the other employees. They become members of certain informal group. The change will bring a fear in mind of people because generally people dislike new adjustments, breaking present social relationships, reduce social relationships, feeling of outside interference in the form of change agent etc.

2. Group Resistance

While working in an organization the employees form informal groups in the organization. Most organizational changes have an impact on informal group in the organization. Breaking up a close knit work group or changing social relationships can provoke a great deal of resistance. The main reason why the groups resist change is that they fear that their cohesiveness or existence is threatened by it. This is particularly true in case of groups which are very cohesive where people have a strong case of belongingness to a group and where members consider the group as superior to the other groups.

3. Organizational Resistance

Organizational resistance means that the change is resisted at the level of the organization itself. Some organizations are so designed that they resist new ideas,

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this is specifically true in case of organizations which are conservative in nature. Government agencies want to continue doing what they have been doing for a number of years even though there is need for the change in their services. Majority of the business firms are also resistant to changes. The major reasons for organizational resistance are:

- **Threat to power.** Top management generally considers change as a threat to their power and influence in the organization due to which the change will be resisted by them. The introduction of participative decision-making or self-managed work teams is the kind of change which is often seen as threatening by the middle and top-level management.
- **Group inertia.** Sometimes, the individuals resist change because the group to which they belong resists it. The degree and force of resistance will depend upon how loyal one is to the group and how effectively the group resists the change.
- **Organizational structure.** Change is often resisted by the bureaucratic structures where jobs are narrowly defined, lines of authority clearly spelled out and flow of information is stressed from top to bottom. Moreover, organizations are made up of a number of interdependent subsystems, one system cannot be changed without affecting the others.
- **Threat to specialization.** Change in organization may threaten the expertise of specialized groups. For example, giving computer training to all the employees in the organization and giving personal computers was perceived as a threat by the experts in computer department of the organization.
- **Resource constraints.** Organizations need adequate financial resources for training change agents and for offering rewards to those who support change. An organization which does not have resources for implementing the change resists it.
- **Sunk costs.** The change is generally resisted by the top management because it often leads to the problem of sunk costs. The heavy capital which already invested in the fixed assets or the amount which has already been spent on the training of the employees will go waste if the change is introduced.

Kurt Lewin's Force-Field Theory of Change

A wide variety of forces make organizations resistant to change, and a wide variety of forces push organizations toward change. Researcher Kurt Lewin developed a theory about organizational change. According to his force-field theory, these two sets of forces are always in opposition in an organization.

When the forces are evenly balanced, the organization is in a state of inertia and does not change. To get an organization to change, the managers must find a way to increase the forces for change, reduce resistance to change, or do both simultaneously. Any of these strategies will overcome inertia and cause an organization to change.

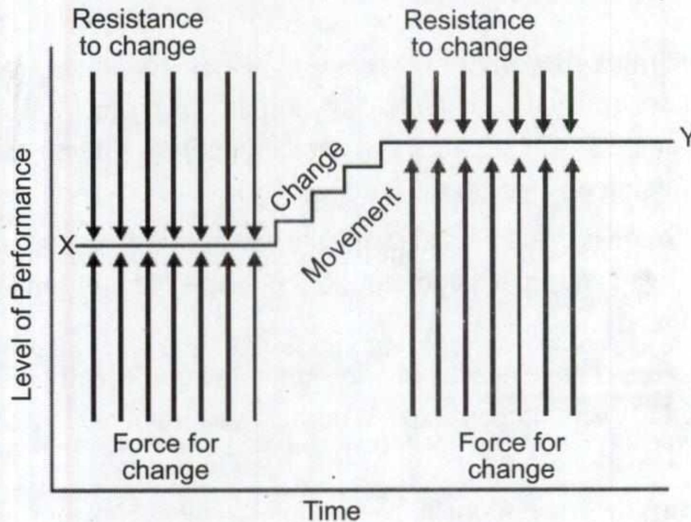


Fig. 4.7

An organization at performance level X is in balance. Forces for change and resistance to change are equal. Management, however, decides that the organization should strive to achieve performance level Y. To get to level Y, the managers must increase the forces for change (the increase is represented by the lengthening of the up arrows), reduce resistance to change (the reduction is represented by the shortening of the down arrows), or do both. If they pursue any of the three strategies successfully, the organization will change and reach performance level Y. Kurt Lewin, whose Force-Field theory argues that organizations are balanced between forces for change and resistance to change, has a related perspective on how managers can bring change to their organization.

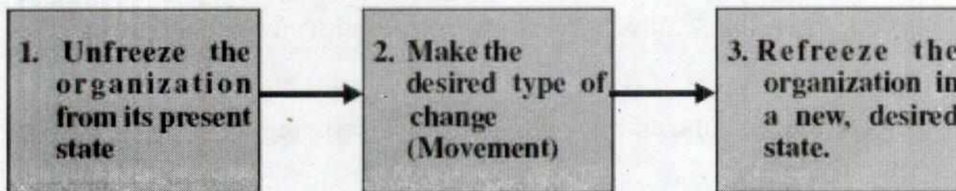


Fig. 4.8

In Lewin's view, implementing change is a three-step process: (1) unfreezing the organization from its present state, (2) making the change, or movement, and (3) refreezing the organization in the new, desired state so that its members do not revert to their previous work attitudes and role behaviors.

4.14 JOHAN P. KOTTER'S EIGHT STEPS TO SUCCESSFUL CHANGE

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"Change is the only constant."

– Heraclitus, Greek philosopher

What was true more than 2,000 years ago is just as true today? We live in a world where "business as usual" is change. New initiatives, project-based working, technology improvements, staying ahead of the competition – these things come together to drive ongoing changes to the way we work.

Whether you're considering a small change to one or two processes, or a system wide change to an organization, it's common to feel uneasy and intimidated by the scale of the challenge.

You know that the change needs to happen, but you don't really know how to go about delivering it. Where do you start? Whom do you involve? How do you see it through to the end?

There are many theories about how to "do" change. Many originate with leadership and change management guru, John Kotter. A professor at Harvard Business School and world-renowned change expert, Kotter introduced his eight-step change process in his 1995 book, "*Leading Change*." We look at his eight steps for leading change below.

Step 1: Create Urgency

For change to happen, it helps if the whole company really wants it. Develop a sense of urgency around the need for change. This may help you spark the initial motivation to get things moving.

This isn't simply a matter of showing people poor sales statistics or talking about increased competition. Open an honest and convincing dialogue about what's happening in the marketplace and with your competition. If many people start talking about the change you propose, the urgency can build and feed on itself.

What you can do:

- Identify potential threats, and develop scenarios showing what could happen in the future.
- Examine opportunities that should be, or could be, exploited.
- Start honest discussions, and give dynamic and convincing reasons to get people talking and thinking.
- Request support from customers, outside stakeholders and industry people to strengthen your argument.

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Step 2: Form a Powerful Coalition

Convince people that change is necessary. This often takes strong leadership and visible support from key people within your organization. Managing change isn't enough – you have to lead it.

You can find effective change leaders throughout your organization – they don't necessarily follow the traditional company hierarchy. To lead change, you need to bring together a coalition, or team, of influential people whose power comes from a variety of sources, including job title, status, expertise, and political importance.

Once formed, your "change coalition" needs to work as a team, continuing to build urgency and momentum around the need for change.

What you can do:

- Identify the true leaders in your organization.
- Ask for an emotional commitment from these key people.
- Work on team building within your change coalition.
- Check your team for weak areas, and ensure that you have a good mix of people from different departments and different levels within your company.

Step 3: Create a Vision for Change

When you first start thinking about change, there will probably be many great ideas and solutions floating around. Link these concepts to an overall vision that people can grasp easily and remember.

A clear vision can help everyone understand why you're asking them to do something. When people see for themselves what you're trying to achieve, then the directives they're given tend to make more sense.

What you can do:

- Determine the values that are central to the change.
- Develop a short summary (one or two sentences) that captures what you "see" as the future of your organization.
- Create a strategy to execute that vision.
- Ensure that your change coalition can describe the vision in five minutes or less.
- Practice your "vision speech" often.

Step 4: Communicate the Vision

What you do with your vision after you create it will determine your success. Your message will probably have strong competition from other day-to-day communications within the company, so you need to communicate it frequently and powerfully, and embed it within everything that you do.

Don't just call special meetings to communicate your vision. Instead, talk about it in every chance you get. Use the vision daily to make decisions and solve

problems. When you keep it fresh on everyone's minds, they'll remember it and respond to it.

It's also important to "walk the talk." What you do is far more important – and believable – than what you say. Demonstrate the kind of behavior that you want from others.

What you can do:

- Talk often about your change vision.
- Openly and honestly address peoples' concerns and anxieties.
- Apply your vision to all aspects of operations – from training to performance reviews. Tie everything back to the vision.
- Lead by example.

Step 5: Remove Obstacles

If you follow these steps and reach this point in the change process, you've been talking about your vision and building buy-in from all levels of the organization. Hopefully, your staff wants to get busy and achieve the benefits that you've been promoting.

But is anyone resisting the change? And are there processes or structures that are getting in its way?

Put in place the structure for change, and continually check for barriers to it. Removing obstacles can empower the people you need to execute your vision, and it can help the change move forward.

What you can do:

- Identify, or hire, change leaders whose main roles are to deliver the change.
- Look at your organizational structure, job descriptions, and performance and compensation systems to ensure they're in line with your vision.
- Recognize and reward people for making change happen.
- Identify people who are resisting the change, and help them see what's needed.
- Take action to quickly remove barriers (human or otherwise).

Step 6: Create Short-term Wins

Nothing motivates more than success. Give your company a taste of victory early in the change process. Within a short time-frame (this could be a month or a year, depending on the type of change), you'll want to have results that your staff can see. Without this, critics and negative thinkers might hurt your progress.

Create short-term targets – not just one long-term goal. You want each smaller target to be achievable, with little room for failure. Your change team may have to work very hard to come up with these targets, but each "win" that you produce can further motivate the entire staff.

What you can do:

- Look for sure-fire projects that you can implement without help from any strong critics of the change.
- Don't choose early targets that are expensive. You want to be able to justify the investment in each project.
- Thoroughly analyze the potential pros and cons of your targets. If you don't succeed with an early goal, it can hurt your entire change initiative.
- Reward the people who help you meet the targets.

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Step 7: Build on the Change

Kotter argues that many change projects fail because victory is declared too early. Real change runs deep. Quick wins are only the beginning of what needs to be done to achieve long-term change.

Launching one new product using a new system is great. But if you can launch 10 products, that means the new system is working. To reach that 10th success, you need to keep looking for improvements.

Each success provides an opportunity to build on what went right and identify what you can improve.

What you can do:

- After every win, analyze what went right and what needs improving.
- Set goals to continue building on the momentum you've achieved.
- Learn about Kaizen, the idea of continuous improvement.
- Keep ideas fresh by bringing in new change agents and leaders for your change coalition.

Step 8: Anchor the Changes in Corporate Culture

Finally, to make any change stick, it should become part of the core of your organization. Your corporate culture often determines what gets done, so the values behind your vision must show in day-to-day work.

Make continuous efforts to ensure that the change is seen in every aspect of your organization. This will help give that change a solid place in your organization's culture.

It's also important that your company's leaders continue to support the change. This includes existing staff and new leaders who are brought in. If you lose the support of these people, you might end up back where you started.

What you can do:

- Talk about progress in every chance you get. Tell success stories about the change process, and repeat other stories that you hear.
- Include the change ideals and values when hiring and training new staff.

- Publicly recognize key members of your original change coalition, and make sure the rest of the staff – new and old – remembers their contributions.
- Create plans to replace key leaders of change as they move on. This will help ensure that their legacy is not lost or forgotten.

4.15 CHANGE IS LIFE: CHANGE OR BE CHANGED

Change happens. And while we can't control much of the world changing around us, we can control how we respond. We can choose to anticipate and embrace changes, or resist them. Resisting change is like trying to push water upstream. Generally we're quick to point to others who resist change. It's much harder to recognize or admit to our own change resistance.

Some people call change "progress" and celebrate the improvements that it brings. Others curse those same changes and wish for the good old days. Same changes, different responses. The choice is ours: We can be leaders, or we can be followers.

Embrace Change

To embrace change, we need to concentrate on five areas.

1. **Focus on a vision.** Our vision or imagination guides everything we do. Helen Keller once said, "Nothing is more tragic than someone who has sight, but no vision." We can't leave the incredible magnetic power of vision unharnessed. Our thoughts often pull us toward the reasons why we can't succeed, rather than the many reasons we can. To increase our effectiveness, we need to consciously attract into our lives what we truly want. We need to ensure the picture of our future is what we prefer, not the dark images of our fears, doubts, and insecurities. Personal, team, or organizational improvement starts with "imagineering."

   We find what we focus upon. Whether I think my world is full of richness and opportunity or garbage and despair — I am right. It's exactly like that because that's my point of focus. Our vision is led by a set of core values. Without a strong set of core values, passion is weak and commitment is soft. We're more likely to lead ourselves from the outside in, rather than the inside out. Core values provide a context for continuous growth and development that takes us toward our dreams. Our core values project forward to become our vision. How we see the world is what we project from ourselves.

2. **Choose your outlook.** We reach another milestone in our growth when we accept responsibility for our emotions. We choose to lose our temper. We choose to become jealous. We choose to harbor hatred. It's much easier to give in to the Victimitis Virus. It's less painful to believe that anger, jealousy, or bitterness are somebody else's fault or beyond our control. But that makes us prisoners of

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our destructive emotions. We hold grudges, let resentments build, and become cynical. We stress ourselves out. We stew in our own deadly juices.

Holding on to destructive emotions is slow suicide. Studies show that stress from negative emotions presents a more dangerous risk factor for cancer and heart disease than smoking cigarettes or high cholesterol foods. We must take responsibility for our actions in response to circumstances for which we are not responsible. The only thing we can control is ourselves, so when we choose our thoughts, we are choosing our future.

3. **Seek authenticity.** To create something we must be something. For example, becoming a parent is easy; being one is tough. We can't teach our kids self-discipline unless we are self-disciplined. We can't help build strong teams unless we are strong team players ourselves.

   This timeless principle applies to every facet of our lives. We can't help develop a close community if we're not a good neighbor. We can't enjoy a happy marriage if we're not a loving partner. We won't have a supportive network of friends or colleagues until we're a supportive friend or collaborative colleague. David Whyte writes, "All things change when we do."

   The big (and often painful) question is: What do I need to change about me to help change them? Instead of just wishing for a change of circumstance, I may need a change of character. Good intentions are useless if they stop there. One big difference between most people and authentic leaders, is action. Real leaders make it happen.

4. **Commit ourselves with discipline.** A key difference between real leaders and those who struggle to get by, is self-discipline. As Confucius wrote, "The nature of people is always the same; it is their habits that separate them." Successful people have formed the habits of doing those things that most people don't want to do.

   Good and bad habits are tiny, daily choices that accumulate. Like a child that grows a little each day, our tiny choices accumulate without much notice. By the time we realize we have either a good or a bad habit, the habit has us.

   Most of our daily choices are made automatically without even thinking about them. To change our habits, we first need to be aware of them. Then we need to work backward from the habit to the daily practices that form it. To change the habit, we need to change those practices.

   Still, if discipline is a key to success, the fact is that most people would rather pick the lock. Less successful people can't pass up instant gratification in favor of some prospective benefit. It's much easier to live for the moment and let tomorrow take care of itself. But it takes discipline to forego the immediately pleasurable, for an investment in the future.

   Discipline means having the vision to see the long-term picture and keep things in balance. A Chinese proverb teaches: "If you are patient in one moment of anger, you will escape a hundred days of sorrow." We all want more patience

— and we want it now! Most of us would like to be delivered from temptation, but we'd like it to stay in touch. Discipline is what keeps us going when the excitement of first beginning a task is long past.

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5. **Continually grow and develop.** Most people see others as they are; a leader sees them as they could be. Leaders see beyond the current problems and limitations to help others see their own possibilities. It's a key part of their own growth and development.

   We continue to grow when we help others grow and develop. The cycle of growth and development has two parts, and the first is our own growth and development, since we can't develop others if our own growth is stunted. These two parts depend upon and support each other. We develop ourselves while we're developing others. By developing others, we develop ourselves. It's a growth cycle that spirals forever upward.

   Another part of the growth process is seeking to be more effective. As the pace of change quickens, it's easier to fall into the trap of confusing busyness with effectiveness. Like the wood-cutter who's too busy chopping to stop and sharpen his axe, we get caught up in a frantic pace that may be taking us to the wrong destination. Reflecting on our progress is as rare as a proud man asking for directions. But to be more effective, we need to step back, take time out, and assess our direction. It will help us grow and keep up with change.

Check Your Progress

State Whether the Following Statements are True or False

5. Change saturation occurs when there is so much change going on that it negatively impacts individuals and the organization.
6. Change disruption is shown to be a function of: culture, history, structure, perceived need for change and change management competency.
7. Organizational resistance means that the change is resisted at the level of the organization itself.
8. The change is generally resisted by the top management because it often leads to the problem of sunk costs.

Making Choices

Change forces choices. If we're on the go, we'll embrace many changes and find the positive in them. It's all in where we choose to put our focus. Even change that hits us in the side of the head as a major crisis can be full of growth opportunities — if we choose to look for them.

Many people who have weathered a serious crisis, look back years later and point to that event as a significant turning point. Most would rather not go through that pain again, but it was a key part of their growth.

Crisis can be a danger that weakens or destroys us. Or crisis can be a growth opportunity. The choice is ours. Whichever we choose, we're right about that crisis. We make it our reality.

The point is, change is life. Successfully dealing with change means choosing to grow and develop continuously. Failing to grow is failing to live.

Case Study: The Hewlett-Packard and Compaq Merger

The following is the brief description of two companies:

Hewlett-Packard (HP)

It all began in the year 1938 when two electrical engineering graduates from Stanford University called William Hewlett and David Packard started their

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business in a garage in Palo Alto. In a year's time, the partnership called Hewlett-Packard was made and by the year 1947, HP was incorporated. The company has been prospering ever since as its profits grew from five and half million dollars in 1951 to about 3 billion dollars in 1981. The pace of growth knew no bounds as HP's net revenue went up to 42 billion dollars in 1997. Starting with manufacturing audio oscillators, the company made its first computer in the year 1966 and it was by 1972 that it introduced the concept of personal computing by a calculator first which was further advanced into a personal computer in the year 1980. The company is also known for the laser-printer which it introduced in the year 1985.

Compaq

The company is better known as Compaq Computer Corporation. This was company that started itself as a personal computer company in the year 1982. It had the charm of being called the largest manufacturers of personal computing devices worldwide. The company was formed by two senior managers at Texas Instruments. The name of the company had come from-"Compatibility and Quality". The company introduced its first computer in the year 1983 at a price of 2995 dollars. In spite of being portable, the problem with the computer was that it seemed to be a suitcase. Nevertheless, there were huge commercial benefits from the computer as it sold more than 53,000 units in the first year with a revenue generation of 111 million dollars.

Reasons for the Merger



A very simple question that arises here is that, if HP was progressing at such a tremendous pace, what was the reason that the company had to merge with Compaq? Carly Fiorina, who became the CEO of HP in the year 1999, had a key role to play in the merger that took place in 2001. She was the first woman to have taken over as CEO of such a big company and the first outsider too. She worked very efficiently as she travelled more than 250,000 miles in the first year as a CEO. Her basic aim was to modernize the culture of operation of HP. She laid great emphasis on the profitable sides of the business. This shows that she was very extravagant in her approach as a CEO. In spite of the growth in the market

value of HP's share from 54.43 to 74.48 dollars, the company was still inefficient. This was because it could not meet the targets due to a failure of both company and industry. HP was forced to cut down on jobs and also be eluded from the privilege of having Price Waterhousecooper's to take care of its audit. So, even the job of Fiorina was under threat. This meant that improvement in the internal strategies of the company was not going to be sufficient for the company's success. Ultimately, the company had to certainly plan out something different. So, it was decided that the company would be acquiring Compaq in a stock transaction whose net worth was 25 billion dollars. Initially, this merger was not planned. It started with a telephonic conversation between CEO HP, Fiorina and Chairman and CEO Compaq, Capellas. The idea behind the conversation was to discuss on a licensing agreement but it continued as a discussion on competitive strategy and finally a merger. It took two months for further studies and by September, 2001, the boards of the two companies approved of the merger. In spite of the decision coming from the CEO of HP, the merger was strongly opposed in the company. The two CEOs believed that the only way to fight the growing competition in terms of prices was to have a merger. But the investors and the other stakeholders thought that the company would never be able to have the loyalty of the Compaq customers, if products are sold with an HP logo on it. Other than this, there were questions on the synchronization of the organization's members with each other. This was because of the change in the organization culture as well. Even though these were supposed to serious problems with respect to the merger, the CEO of HP, Fiorina justified the same with the fact that the merger would remove one serious competitor in the over-supplied PC market of those days. She said that the market share of the company is bound to increase with the merger and also the working unit would double.

Advantages of the Merger

Even though it seemed to be advantageous to very few people in the beginning, it was the strong determination of Fiorina that she was able to stand by her decision. Wall Street and all her investors had gone against the company lampooning her ideas with the saying that she has made 1+1=1.5 by her extravagant ways of expansion. Fiorina had put it this way that after the company's merger, not only would it have a larger share in the market but also the units of production would double. This would mean that the company would grow tremendously in volume. Her dream of competing with the giants in the field, IBM would also come true. She was of the view that much of the redundancy in the two companies would decrease as the internal costs on promotion, marketing and shipping would come down with the merger. This would produce the slightest harm to the collection of revenue. She used the ideas of competitive positioning to justify her plans of the merger. She said that the merger is based on the ideologies of consolidation and not on diversification. She could also defend allegations against the change in the HP was. She was of the view that the HP has always encouraged changes as

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it is about innovating and taking bold steps. She said that the company requires being consistent with creativity, improvement and modification. This merger had the capability of providing exactly the same.

Advantages to the Shareholders

The following are the ways in which the company can be advantageous to its shareholders:

- **Unique Opportunity:** The position of the enterprise is bound to better with the merger. The reason for the same was that now the value creation would be fresh, leadership qualities would improve, capabilities would improve and so would the sales and also the company's strategic differentiation would be better than the existing competitors. Other than this, one can also access the capabilities of Compaq directly hence reducing the cost structure in becoming the largest in the industry. Finally, one could also see an opportunity in reinvesting.
- **Stronger Company:** The profitability is bound to increase in the enterprise, access and services sectors in high degrees. The company can also see a better opportunity in its research and development. The financial conditions of the company with respect to its EBIT and net cash are also on the incremental side.
- **Compelling Economics:** The expected accumulation in IIP gains would be 13% in the first financial year. The company could also conduct a better segmentation of the market to forecast its revenues generation. This would go to as much as 2 and a half billion dollars of annual synergy.
- **Ability to Execute:** As there would be integration in the planning procedures of the company, the chances of value creation would also be huge. Along with that the experience of leading a diversified employee structure would also be there.

Opposition to the Merger

In fact, it was only CEO Fiorina who was in favor of going with the merger. This is a practical application of Agency problem that arises because of change in financial strategies of the company owners and the management. Fiorina was certain to lose her job if the merger didn't take effect. The reason was that HP was not able to meet the demand targets under her leadership. But the owners were against the merger due to the following beliefs of the owners:

- **The new portfolio would be less preferable:** The position of the company as a larger supplier of PCs would certainly increase the amount of risk and involve a lot of investment as well. Another important reason in this context is that HP's prime interest in Imaging and Printing would not exist anymore as a result diluting the interest of the stockholders. In fact the company owners also feel that there would be a lower margin and ROI (return on investment).

- **Strategic problems would remain unsolved:** The market position in high-end servers and services would still remain inspite of the merger. The price of the PCS would not come down to be affordable by all. The requisite change in material for imaging and printing also would not exist. This merger would have no effect on the low end servers as DELL would be there in the lead and high-end servers either where IBM and Sun would have the lead. The company would also be eluded from the advantages of outsourcing because of the surplus labor it would have. So, the quality is not guaranteed to improve. Finally, the merger would not equal IBM under any condition as thought by Fiorina.
- **Huge integrated risks:** There have been no examples of success with such huge mergers. Generally when the market doesn't support such mergers, don't do well as is the case here. When HP could not manage its organization properly, integration would only add on to the difficulties. It would be even more difficult under the conditions because of the existing competitions between HP and Compaq. Being prone to such risky conditions, the company would also have to vary its costs causing greater trouble for the owner. The biggest factor of all is that to integrate the culture existing in the two companies would be a very difficult job.
- **Financial impact:** This is mostly because the market reactions are negative. On the other hand, the position of Compaq was totally different from HP. As the company would have a greater contribution to the revenue and HP being diluted at the same time, the problems are bound to develop. This would mean that drawing money from the equity market would also be difficult for HP. In fact this might not seem to be a very profitable merger for Compaq as well in the future.

The basic problem that the owners of the company had with this merger was that it would hamper the core values of HP. They felt that it is better to preserve wealth rather than to risk it with extravagant risk taking. This high risk profile of Fiorina was a little unacceptable for the owners of the company in light of its prospects.

So, as far as this merger between HP and Compaq is concerned, on one side there was this strong determination of the CEO, Fiorina and on the other side was the strong opposition from the company owners. This opposition continued from the market including all the investors of the company. So, this practical Agency problem was very famous considering the fact that it contained two of the most powerful hardware companies in the world. There were a number of options like Change Management, Economic-wise Management, and Organizational Management which could be considered to analyze the issue. But this case study can be solved best by a strategy-wise analysis. (HP-Compaq merger faces stiff opposition from shareholders stock, prices fall again, 2001)

Strategic Analysis of the Case

Positive Aspects

A CEO will always consider such a merger to be an occasion to take a competitive advantage over its rivals like IBM as in this case and also be of some interest to the shareholders as well. The following are the strategies that are related to this merger between HP and Compaq:

- **Having an eye over shareholders' value:** If one sees this merger from the eyes of Fiorina, it would be certain that the shareholders have a lot to gain from it. The reason for the same is the increment in the control of the market. So, even of the conditions were not suitable from the financial perspective, this truth would certainly make a lot of profits for the company in the future.
- **Development of Markets:** Two organizations get involved in mergers as they want to expand their market both on the domestic and the international level. Integration with a domestic company doesn't need much effort but when a company merges internationally as in this case, a challenging task is on head. A thorough situation scanning is significant before putting your feet in the international arena. Here, the competitor for HP was Compaq to a large degree, so this merger certainly required a lot of thinking. Organizations merge with the international companies in order to set up their brands first and let people know about what they are capable of and also what they eye in the future. This is the reason that after this merger the products of Compaq would also have the logo of HP. Once the market is well-known, then HP would not have to suffer the branding created by Compaq. They would be able to draw all the customers of Compaq as well.
- **Propagated Efficiencies:** Any company by acquiring another or by merging makes an attempt to add to its efficiencies by increasing the operations and also having control over it to the maximum extent. We can see that HP would now have an increased set of employees. The only factor is that they would have to be controlled properly as they are of different organizational cultures. (Benefits of Mergers: 2010).
- **Allowances to use more resources:** An improvised organization of monetary resources, intellectual capital and raw materials offers a competitive advantage to the companies. When such companies merge, many of the intellects come together and work towards a common mission to excel with financial profits to the company. Here, one can't deny the fact that even the top brains of Compaq would be taking part in forming the strategies of the company in the future.
- **Management of risks:** If we particularly take an example of this case, HP and Compaq entering into this merger can decrease the risk level they would have diversified business opportunities. The options for making choice of

the supply chain also increase. Now even though HP is a pioneer in inkjet orienting, it would not have to use the product-based facility layout which is more expensive. It can manage the risk of taking process based facility layout and make things cheaper. Manufacturing and Processing can now be done in various nations according to the cost viability as the major issue.

- **Listing potential:** Even though Wall Street and all the investors of the company are against the merger, when IPOs are offered, a development will definitely be there because of the flourishing earnings and turnover value which HP would be making with this merger.
- **Necessary political regulations:** When organizations take a leap into other nations, they need to consider the different regulations in that country which administer the policies of the place. As HP is already a pioneer in all the countries that Compaq used to do its business, this would not be of much difficulty for the company. The company would only need to make certain minor regulations with the political parties of some countries where Compaq was flourishing more than HP.
- **Better opportunities:** When companies merge with another company, later they can put up for sale as per as the needs of the company. This could also be done partially. If HP feels that it would not need much of warehouse space it can sell the same at increased profits. It depends on whether the company would now be regarded as a make to stock or a make to order company.
- **Extra products, services, and facilities:** Services get copyrights which enhances the level of trade. Additional warehouse services and distribution channels offer business values. Here HP can use all such values integrated with Compaq so as to increase its prospects.

Negative Aspects

There are a number of mergers and acquisitions that fail before they actually start to function. In the critical phase of implementation itself, the companies come to know that it would not be beneficial if they continue as a merger. This can occur in this merger between HP and Compaq due to the following reasons.

- **Conversations are not implemented:** Because of unlike cultures, ambitions and risk profiles; many of the deals are cancelled. As per as the reactions of the owners of HP, this seems to be extremely likely. So, motivation amongst the employees is an extremely important consideration in this case. This requires an extra effort by the CEO, Fiorina. This could also help her maintain her position in the company.
- **Legal contemplations:** Anti-competitive deals are often limited by the rules presiding over the competition rules in a country. This leads to out of order functioning of one company and they try to separate from each other. A lot of

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unnecessary marketing failures get attached to these conditions. If this happens in this case, then all that money which went in publicizing the venture would be a waste. Moreover, even more would be required to re-promote as a single entity. Even the packaging where the entire inventory from Compaq had the logo of HP would have to be re-done, thus hampering the finance even further. (Broc Romanek, 2002).

- **Compatibility problems:** Every company runs on different platforms and ideas. Compatibility problems often occur because of synchronization issues. In IT companies such as HP and Compaq, many problems can take place because both the companies have worked on different strategies in the past. Now, it might not seem necessary for the HP management to make changes as per as those from Compaq. Thus such problems have become of greatest concern these days.
- **Fiscal catastrophes:** Both the companies after signing an agreement hope to have some return on the money they have put in to make this merger happen and also desire profitability and turnovers. If due to any reason, they are not able to attain that position, then they develop a abhorrence sense towards each other and also start charging each other for the failure.
- **Human resource differences:** Problems as a result of cultural dissimilarities, hospitality and hostility issues, and also other behavior related issues can take apart the origin of the merger.
- **Lack of determination:** When organizations involve, they have plans in their minds, they have a vision set; but because of a variety of problems as mentioned above, development of the combined company to accomplish its mission is delayed. Merged companies set the goal and when the goal is not accomplished due to some faults of any of the two; then both of them develop a certain degree of hatred for each other. Also clashes can occur because of bias reactions. (William, 2008).
- **Risk management failure:** Companies that are involved in mergers and acquisitions, become over confident that they are going to make a profit out of this decision. This can be seen as with Fiorina. In fact she can fight the whole world for that. When their self-confidence turns out into over-confidence then they fail. Adequate risk management methods should be adopted which would take care of the effects if the decision takes a downturn. These risk policies should rule fiscal, production, marketing, manufacturing, and inventory and HR risks associated with the merger.

Strategic Sharing

- **Marketing:** HP and Compaq would now have common channels as far as their buying is concerned. So, the benefits in this concern is that even

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for those materials which were initially of high cost for HP would now be available at a cheaper price. The end users are also likely to increase. Now, the company can reframe its competitive strategy where the greatest concern can be given to all time rivals IBM. The advantages of this merger in the field of marketing can be seen in the case of shared branding, sales and service. Even the distribution procedure is likely to be enhanced with Compaq playing its part. Now, the company can look forward to cross selling, subsidization and also a reduced cost.

- **Operations:** The foremost advantage in this area is that in the location of raw material. Even the processing style would be same making the products and services synchronized with the ideas and also in making a decent operational strategy. As the philosophical and mechanical control would also be in common, the operational strategy would now be to become the top most in the market. In this respect, the two companies would now have co-production, design and also location of staff. So, the operational strategy of HP would now be to use the process based facility layout and function with the mentioned shared values.
- **Technology:** The technical strategy of the company can also be designed in common now. There is a disadvantage from the perspective of the differentiation that HP had in the field of inkjet printers but the advantages are also plentiful. With a common product and process technology, the technological strategy of the merged company would promote highly economical functioning. This can be done through a common research and development and designing team.
- **Buying:** The buying strategy of the company would also follow a common mechanism. Here, the raw materials, machinery, and power would be common hence decreasing the cost once again. This can be done through a centralized mechanism with a lead purchaser keeping common policies in mind. Now HP would have to think with a similar attitude for both inkjet printers as well as personal computers. This is because the parameters for manufacturing would also run on equal grounds.
- **Infrastructure:** This is the most important part of the strategies that would be made after the merger. The companies would have common shareholders for providing the requisite infrastructure. The capital source, management style, and legislation would also be in common. So, the infrastructure strategies would have to take these things into account. This can be done by having a common accounting system. HP does have an option to have a separate accounting system for the products that it manufactures but that would only arouse an internal competition. So, the infrastructural benefits can be made through a common accounting, legal and human resource system. This would

ensure that the investment relations of the company would improve. None of the Compaq investors would hesitate in making an investment if HP follows a common strategy.

HP would now have to ensure another fact that with this merger they would be able to prove competitors to the present target and those of competitors like IBM as well. Even the operations and the output market needs to be above what exists at present. The company needs to ensure that the corporate strategy that it uses is efficient enough to help such a future. The degree of diversification needs to be managed thoroughly as well. This is because; the products from the two companies have performed exceptionally well in the past. So, the most optimum degree of diversification is required under the context so that the company is able to meet the demands of the customers. This has been challenged by the owners of HP but needs to be carried by the CEO Fiorina.

Source: *http://www.mbaknol.com/management-case-studies/case-study-the-hewlett-packard-and-compaq-merger/*

4.16 SUMMARY

- Change management is a defined, standardized process used in the information technology service management to coordinate and control all changes made to an existing, production technical solution.
- Organisational change management is the management of change from the perspective of the top leadership looking down into the organisation. It focuses on the broad change management practices and skills to help the organisation comprehend, accept and support the required changes
- There are different kinds of change that an organization might undertake or be forced to undertake because of internal and external factors.
- A change management program is a structured system companies use to adjust or alter their operations. Companies can undergo change for a number of reasons, driven by forces internal and external to the company.
- To maximise the chances of achieving effective change there are 5 levers of change that must be addressed. Missing just one will allow the chances of success to decrease dramatically.
- Grand strategy is the overarching discipline that deals with defining and refining the way an organization is managed so as not just to succeed in the current period, but to maintain its competitive health into the indefinite future.
- Change saturation occurs when there is so much change going on that it negatively impacts individuals and the organization.

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- Resistance to change provides a degree of stability and predictability to behavior, as it does not allow immediate change. If there was no resistance to change the organization will take on characteristics of chaotic randomness.

4.17 KEY TERMS

- **Change management:** Change management is a defined, standardized process used in the information technology service management to coordinate and control all changes made to an existing, production technical solution.
- **Organisational change management:** Organisational change management is the management of change from the perspective of the top leadership looking down into the organisation. It focuses on the broad change management practices and skills to help the organisation comprehend, accept and support the required changes
- **Change management program:** A change management program is a structured system companies use to adjust or alter their operations. Companies can undergo change for a number of reasons, driven by forces internal and external to the company.
- **Change saturation:** Change saturation occurs when there is so much change going on that it negatively impacts individuals and the organization.

4.18 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Change management is a defined, standardized process used in the information technology service management to coordinate and control all changes made to an existing, production technical solution.
2. Individual change management is the management of change from the perspective of the employees who are at the bottom level.
3. A change management program is a structured system companies use to adjust or alter their operations. Companies can undergo change for a number of reasons, driven by forces internal and external to the company.
4. Grand strategy is the overarching discipline that deals with defining and refining the way an organization is managed so as not just to succeed in the current period, but to maintain its competitive health into the indefinite future.
5. True.
6. False.
7. True.
8. True.

4.19 QUESTIONS AND EXERCISES

Short Answer Questions

1. Define change management.
2. What are the different types of change?
3. What are the key areas of changes in business?
4. What are the change levers?
5. Define change saturation.
6. State the meaning of change resistance.
7. What do you mean by group resistance?

Long Answer Questions

1. Discuss the meaning and nature of CM. What are the different types of change?
2. Discuss the relationship between change and growth.
3. Discuss CM as 'Unconscious Incompetence' to 'Conscious Competence'
4. What are the key phases of mapping changes?
5. What are the key levels and symptoms of change saturation?
6. What are the different categories of change resistance?
7. Discuss the Johan P. Kotter's eight steps to successful shange.
8. Change is Life: Change or Be Changed. Discuss.

UNIT 5 CHANGE MANAGEMENT PROCESS AND IMPROVEMENT

Structure

5.0 INTRODUCTION

A change management process is a series of business practices used to control and manage change within a large system or organization. The term is most commonly used in systems engineering or large construction projects. The purpose of change management is to ensure there is clear communication between the client and the service provider about the requested variation from the accepted specifications, the impact on the timeline, and the projected cost of those changes. An added bonus to this process is the validation of authorization for the change requests.

The change management process is the sequence of steps or activities that a change management team or project leader would follow to apply change management to a project or change. Based on Prosci's research of the most effective and commonly applied change, most change management processes contain the following three phases:

- **Phase 1:** *Preparing for change* (Preparation, assessment and strategy development)
- **Phase 2:** *Managing change* (Detailed planning and change management implementation)
- **Phase 3:** *Reinforcing change* (Data gathering, corrective action and recognition)

These phases result in the following approach as shown in Figure 5.1.

It is important to note what change management is and what change management is not, as defined by the majority of research participants. To manage the requests for change, many companies design a form that provides all the required information. For example, a change request form typically requires the name of the requester and his or her title, the business rationale for the request, the functionality required, and the overall implications. The names of the people responsible and who will test and accept the changes are also included. Upon receipt and review of the form, the system administrator assigns a tracking number to the request.

The person responsible for the system or project now reviews the request details and calculates the resources required, time allocation, and any costs associated with the implementation of this change. During this process, there may be questions or clarification required from the requester. This information is incorporated into the change request form.

If the costs are accepted, then the request is typically added to a prioritized list of other change requests, as part of the change management process. The work is assigned to a specific area, which will liaison with the system or project manager to clarify requirements, and make the necessary changes. In an information technology environment, these changes are made in a testing system. It is the responsibility of the testers to ensure the changes meet their original requirements and do not create negative results. Upon successful completion of testing, the changes are moved into the production or live system. Any issues or new problems created as a result of this change are reviewed and may result in additional cycles of changes, testing, and implementation.

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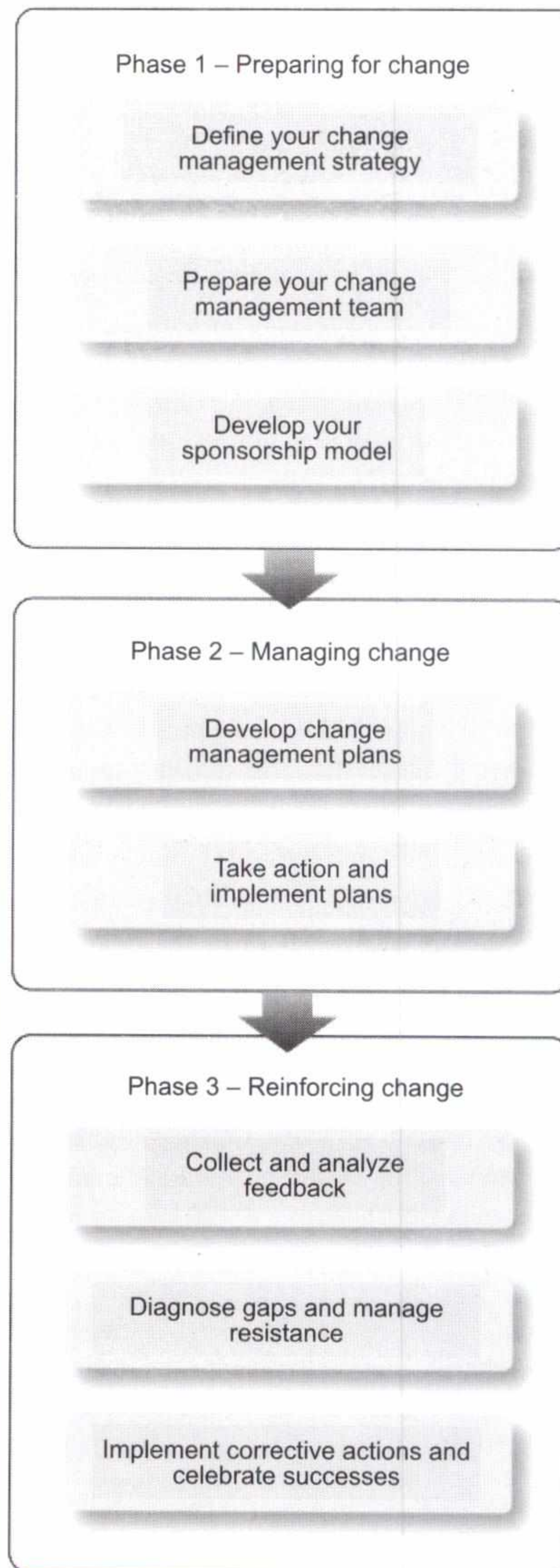


Fig. 5.1: Change Management Process

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5.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Describe the key elements of change management process
- Explain the Kurt Lewin's theory of change management
- State the Fisher's process of transition model
- Describe change management toolkit, pilot and best practices
- State the meaning of continuous change and improvement
- List the key change checklist.

5.2 PREPARING FOR CHANGE

The first phase in Prosci's methodology is aimed at getting ready. It answers the question: "how much change management is needed for this specific project?" The first phase provides the situational awareness that is critical for effective change management. This part of the change management process involves identifying issues, environmental factors which are causing the need to change and any other accompanying data. There should be a lot of searching and identifying exactly what the real root cause to the problems being faced.

Once this need is identified the following general steps can be taken:

- **Develop new goals and objectives:** The manager must identify as to what new outcomes they wish to achieve. This may be modification of previous goals due to changed internal and external environment or it may be a new set of goals and objectives.
- **Select an agent of change:** The next step is that the management must decide as to who will initiate and oversee this change. One of the existing managers may be assigned this duty or even sometimes specialists and consultants can be brought in from outside to suggest the various methods to bring in the change and monitor the change process.
- **Diagnose the problem:** The person who is appointed as the agent of the change will then gather all relevant data regarding the area of problem or the problem where the change is needed. This data should be critically analysed to pinpoint the key issues. Then the solutions can be focused on those key issues.
- **Select Methodology:** The next important step is to select a methodology for change; employee's emotion must be taken into consideration when devising such methodology.
- **Develop a plan:** After devising the methodology, the next step will be to put together a plan as to what is to be done. For example, if the management wants

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to change the promotion policy, it must decide as to what type of employees will be affected by it, whether to change the policy for all the departments at once or to try it on a few selected departments first.

- **Strategy for the implementation of the plan:** In this stage, the management must decide on the 'when', 'where' and 'how' of the plan. This includes the right time of putting the plan to work, how the plan will be communicated to the employees in order to have the least resistance and how the implementation will be monitored.

5.3 IMPLEMENTING CHANGE

Once the management is able to establish favourable conditions, the right timing and right channels of communication have been established the plan will be put into action. It may be in the form of simple announcement or it may require briefing sessions or in-house seminars so as to gain acceptance of all the members and specify those who are going to be directly affected by the change.

After the plan has been implemented there should be evaluation of the plan which comprises of comparing actual results to the objectives. Feedback will confirm if these goals are being met so that if there is any deviation between the goals and actual performance, corrective actions can be taken.

Provide Training & Facilitate for Results

The initiatives and actions are implemented using a variety of methods, programs, forums, meetings and communication strategies that have been identified.

- Often training and coaching is necessary in new skills and behaviors to motivate and align people and teams to lead and respond to change effectively.
- These programs and facilitation are directly applied to real world applications on the necessary change initiatives that have been identified, leveraging a significant Return-on-Objectives (ROO) and Return-on-Investment (ROI)

Deal with "Gaps" & Resistance

During this phase, real-time feedback is obtained and possible progress measurements are taken. "Gaps" and "areas of resistance" (anticipated or unanticipated) are addressed promptly, and correction actions are taken.

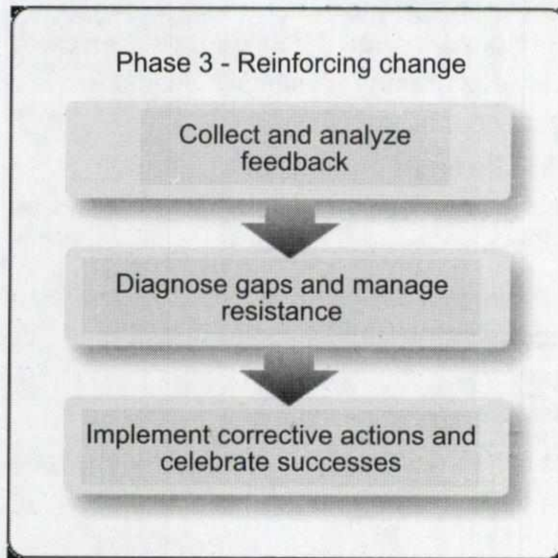
Recognize Results

Positive results from "wins" (small and large) are celebrated, and individuals and teams are recognized in appropriate ways for leading change.

5.4 REINFORCING CHANGE

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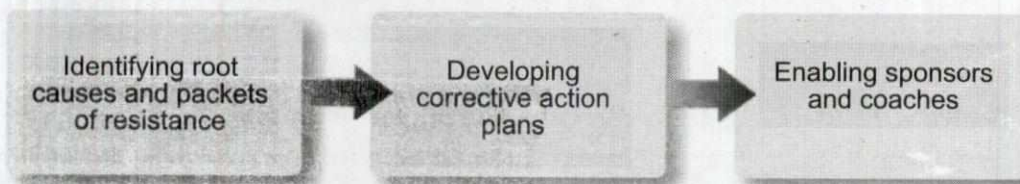
Reinforcing the change is essential to make sure it sticks. Maintaining a results orientation will be critical to your success. Simply doing change management activities is not enough. You must evaluate the results of these activities, determine the root cause of any gaps and implement corrective action.



The second stage, diagnosing gaps and managing resistance has three steps:

1. Determine the root cause of resistance.
2. Develop plans to address these root causes.
3. Prepare sponsors and coaches to manage resistance.

Diagnose gaps and manage resistance



It is important to understand that diagnosing gaps and managing resistance is an ongoing activity through the project, not just in one stage. Diagnosing gaps and managing resistance is essential in both the preparing for change and managing change stages of the process, not only in the reinforcing change stage.

1. Determine the root cause of resistance

Based on the feedback from step one, determine the root cause of the problem. Continue to ask the question, “Why is this happening” until you have found the root cause of the problem.

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Use the ADKAR model to determine if the root cause of the performance gap is awareness, desire, knowledge, ability or reinforcement.

ADKAR change management is one of many change management models which can assist in the development of a cultural transition program. It focuses on change at an individual level, and the specific needs of that individual, in order for that person to change their behaviours to the desired ways of working – the new culture: the new way we do business!

ADKAR was developed by Jeff Hiatt of Prosci research in 1998 and was initially used as a tool for determining if change management activities were having the desired results during organisational change.

Now, it is used widely and for many, the tool of choice to help identify and drive change whilst also being used as a tool to understand any gaps that are needed to strengthen along the change process.

It is also a useful framework for planning change within an organisation, before implementation, and more importantly, a useful model in the execute phase of the change management process.

The theory is simple: Each step in the ADKAR model focuses on people and how to create the right conditions for those effected by change to eventually adopt new behaviours and ways of working.

The Five Elements of ADKAR

Each element of the ADKAR change management model must be thoroughly completed and should also be followed in a sequential basis in order for successful change to take place. The five steps of the ADKAR change management model are as follows:

- **Awareness:** Create an understanding for the need to change – i.e. Why is the change necessary? Why is it happening now? What is wrong with what we are doing today? What will happen if we don't change? What's in it for the individuals?
- **Desire:** Create the desire to support and take part in the change – Which is dependent on the nature of change, the credibility of the person leading the message of change, intrinsic factors, history of the organisation. Effective leading and influencing can go a long way to help people choose to follow the desire to change.
- **Knowledge:** Give knowledge so people can understand how to change and what to do – i.e. providing training and education, detailed understanding of new tasks, processes and systems, and understanding new roles and responsibilities.
- **Ability:** Provide the skills to implement change on a day-to-day basis – i.e. Providing day-to-day involvement, access to subject matter experts, provide effect performance monitoring, hands on exercise during training.

- **Reinforcement:** Create the ability and environment to sustaining the change and keep it going, keeping the momentum going. – i.e. celebrations and recognition, rewards, feedback to and from employees, audits and performance measurement systems, accountability systems.

2. Develop corrective action plans to address these root causes

Determine the appropriate steps to take to address the root cause of the performance gap. For each problem area, prepare the following for your primary sponsor or steering committee:

- Findings from feedback and compliance audit
- Root cause of these performance gaps
- Corrective action plan

Develop corrective actions based on the ADKAR model and your root cause analysis:

- If awareness was the root cause, examine past communications and messages to this group. Create messages that address any gaps in building awareness around why the change is needed.
- If desire was the root cause, then assess the incentives or consequences that would create motivation to change. Are these incentives or consequences sufficient? Do adjustments to the incentives or consequences need to be made? Are these incentives and consequences understood? Have your coach plans and resistance management plans been effective?
- If knowledge was the root cause, examine the education programs that are available as well as the attendance and effectiveness of these programs. Is additional work needed? Do current programs need to be redesigned? Are there gaps in the knowledge and skills being taught to employees?
- If ability was the root cause, personal coaching plans and/or personal assistance may be required. What on-the-job assistance is offered? Can employees get immediate help? What happens when a situation arises that does not strictly match what they were taught?
- If reinforcement was the root cause, what systems, values or reward systems reinforce the change? Do the systems allow employees to do the process both ways? Do reports and performance evaluations encourage following the new processes, systems and job roles? Are consequences in place for not following the new processes, systems or job roles?

Corrective action plan template

1. Target of corrective action:
2. Findings from feedback and compliance audit:
3. Root cause of resistance:

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4. ADKAR analysis:
5. Coaching intervention strategy:
   (a) who:
   (b) what:
   (c) when:
6. Consequences intervention strategy:
   (a) who:
   (b) what:
   (c) when:
7. Support or actions needed from stakeholders:

3. Enabling sponsors and coaches to manage change

Prepare managers and supervisors with the background information and tools they will need to manage resistance and implement corrective action.

In most cases, the best person to resolve a point of resistance with an employee or group of employees will be their direct supervisor or highest level manager. If the supervisor was not identified as the root cause of the problem, then provide this supervisor with the following: the problem you need to address, why this problem needs to be addressed (the impact that it is having on the change) and what steps you need taken. If job aides or tools are needed, provide these tools to the supervisor as well. If the supervisor has not had formal training in change management, you will need to spend time coaching this supervisor on the tools and processes for working with employees.

Now that you have developed your corrective action plans, the next step is implementing the corrective actions in order to resolve your performance gaps. The last module in this tutorial series will focus on that step and include why celebrating success is so important.

5.5 KURT LEWIN'S THEORY OF CM: UNFREEZING, MOVING AND REFREEZING

In the previous section we have studied about the key steps included into a change management process. There are a numbers of models developed by the key scholars. The following section will cover the key aspects of Kurt Lewin's model of change management. Kurt Lewin had a profound influence on the theory and practice of change in organisation. Most theories of organisational change originated from the landmark work of this social psychologist. Lewin (1947) instituted a three-stage model of change which explained how to initiate, manage and stabilize the change process. The three stages of change, according to this model are, unfreezing, changing,

and refreezing. Let us first go through the various assumptions underlying Lewin's model of change (USDA). These are:

1. The change process involves learning something new, as well as discontinuing current attitudes, behaviours, or organisational practices.
2. Change will not occur unless there is motivation to change. This is often the most difficult part of the change process.
3. Individuals are the centre of all organisational changes. Any change, whether in terms of structure, group process, reward systems, or job design, requires individuals to change.
4. Resistance to change is found even when the goals of change are highly desirable.
5. Effective change requires reinforcing new behaviours, attitudes and organisational practices.

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A commonly accepted model for bringing about changes in people was suggested by KURT LEWIN in terms of three phase's process:-

- Unfreezing
- Changing
- Refreezing

Unfreezing

Unfreezing means that old ideas and attitudes are set aside to give place to new ideas. It refers to making people aware that the present behaviour is inappropriate, irrelevant, inadequate and hence unsuitable for changing demands of the present situation.

According to EGAR SHIEN the following four elements are necessary during this unfreezing phase:

- The physical removal of the individuals, being changed from their accustomed routines, sources of information and social relationships.
- The undermining and destruction of social support.
- Demeaning and humiliating experience to help individuals, being changed, to see their old attitudes or behaviour as unworthy and think to be motivated to change.
- The consistent linking of reward with willingness to change and of punishment with willingness to change.

Unfreezing thus involves discarding the orthodox and conventional methods and introducing dynamic behaviour, most appropriate to the situation. People are made to accept new alternatives.

Changing/Moving

Unlike unfreezing changing is not uprooting of the old ideas, rather the old ideas are gradually replaced by the new ideas and practices. In changing phase new learning

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occurs. The necessary requirement is that various alternatives of behaviour must be made available in order to fill the vacuum created by unfreezing phase. During the phase of changing, individuals learn to behave in new ways, the individuals are provided with alternatives out of which choose the best one.

KLMAN explains changing phase in terms of the following elements:-

- Compliance: it occurs when individuals are forced to change either by reward or by punishment.
- Internalisation: it occurs when individuals are forced to encounter a situation and calls for new behaviour.
- Identification: it occurs when individuals recognize one among various models provided in the environment that is most suitable to their personality.

Refreezing

Refreezing is on the job practice. The old ideas are totally discarded and new ideas are totally accepted. Refreezing reinforced attitudes, skills and knowledge. He practices and experiments with the new method of behaviour and sees that it effectively blends with his other behavioural attitudes.

Practical steps for using this model

In a similar approach to the other change management models, there are a number of steps that can be taken for each phase of the three stage model:

Unfreeze

- Survey the organisation and its performance to understand the baseline – Where are we now?
- Understand where you want the organisation to be
- Create a clear vision
- Understand what potential barriers will appear when the change happens
- Create a transition plan to change culture

Change

- Deliver the clear change message and communicate the vision
- Manage any doubts and concerns
- Lead the vision and drive for change
- Communicate, communicate, and communicate!
- Dispel rumours and create clear messages of the vision and how to get there
- Allow people to journey through their own [change curve]
- Create an environment for employee involvement
- Create and celebrate short-term successes

- Identify and overcome barriers that will prevent sustaining of new culture
- Provide training and support the new way of working

Re-Freeze

- Anchor these cultural changes – Create regular feedback
- Reward the correct behaviour
- Celebrate successes
- Establish feedback systems
- Create a reward system
- Constantly lead by example and support individuals through the change

In this model Lewin identified three ways that organisational change could be accomplished (Branch, 2002):

(i) Changing the individuals who work in the organisation (their skills, values, attitudes and behaviour).

(ii) Changing various organisational structures and systems like reward systems, work designs, relationships etc.

(iii) Directly changing the organisational climate or interpersonal style i.e., issues like how often people are with each other, how the conflict is managed and how decisions are made.

This model has attracted major criticisms. The key ones are that his work assumed organisations operate in a stable state, was only suitable for small-scale change projects, ignored power and politics, and was top-down and management driven. But rather than being outdated or redundant, Lewin's opporach is still relevant to the modern world.

5.6 FISHER'S PROCESS OF TRANSITION MODEL

Originally presented at the Tenth International Personal Construct Congress, Berlin, 1999, and subsequently developed in his work on constructivist theory in relation to service provision organisations at Leicester University, England, John Fisher's model of personal change – The Personal Transition Curve – revised again in Nov 2012 – is an excellent analysis of how individuals deal with personal change. This model is an extremely useful reference for individuals dealing with personal change and for managers and organizations helping staff to deal with personal change.

Any change, no matter how small, has the potential to have a major impact on an individual, their self view and subsequent performance. The anticipated outcome may generate conflict between one's existing actions, values and beliefs and the anticipated new ones. However, it must be remembered that an individual operates within a multitude of environments within an organisation. At the most basic level, there are three such levels – the individual, the natural work team and

the organisation coupled with both internal interfaces and external customer/supplier interfaces. Therefore any change to the individual and their perception will send ripples across many boundaries and set up many change waves as the person moves mentally. One common metaphor for this transition process is that of bridging the gap between two peaks, one representing where we are now and the other the goal. How steep the valley we need to cross is depends on a number of things, e.g. how much support, communication and ownership we feel we have during the journey and our understanding of what the new peak represents. As a person, we all go through a series of set, defined, stages whilst in the process of changing (see Fig. 5.2), how quickly we transit across the valley or how deeply we go into the trough of depression and how long we stay there, however, depends on certain factors such as ownership and control.

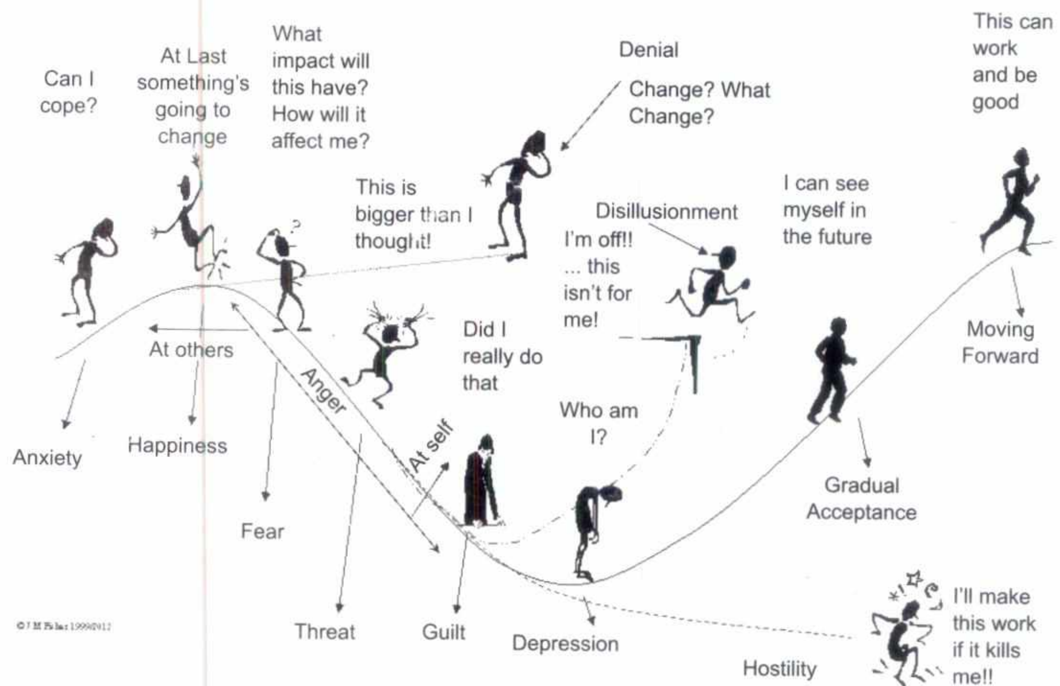


Fig. 5.2: Process of Changing

The stages we go through on our journey are complex and may only take a short amount of time or we may be there for a while coming to terms with the situation. Much of the speed of transition will depend on the individual's self perception, locus of control, and other past experiences, and how these all combine to create their anticipation of future events. Much of the actual transition through the stages is done subconsciously, and may only be apparent on reflection. Also, if we have initiated the change and we start to encounter difficulties we may then go into the trough of depression rather than as a result of the change, so, ironically, it's the lack of change or lack of progress through the phases that gives us the problem. One

danger for the individual, team and organisation occurs when an individual persists in operating a set of practices that have been consistently shown to fail (or result in an undesirable consequence) in the past and that do not help extend and elaborate their world-view. Another danger area is that of denial where people maintain operating as they always have denying that there is any change at all. Both of these can have detrimental impact on an organisation trying to change the culture and focus of its people. To help people move through the transition effectively we need to understand their perception of the past, present and future (Fisher, 2005). What is their past experience of change and how has it impacted on them? How did they cope? Also what will they be losing as part of the change and what will they be gaining?

The Stages

Anxiety

The awareness that events lie outside one's range of understanding or control. I believe the problem here is that individuals are unable to adequately picture the future. They do not have enough information to allow them to anticipate behaving in a different way within the new organisation. They are unsure how to adequately construe acting in the new work and social situations. There is also the possibility for what McCoy (1977) defined as 'bewilderment' here; which she defined as an awareness of an imminent, comprehensive change in our non-core structure. How we then deal with this dictates how we progress through the rest of the curve and the extent of the impact on our core sense of self.

Happiness

The awareness that one's viewpoint is recognised and shared by others. The impact of this is twofold. At the basic level there is a feeling of relief that something is going to change and not continue as before. Whether the past is perceived positively or negatively, there is still a feeling of anticipation and possibly excitement at the possibility of improvement. On another level, there is the satisfaction of knowing that some of your thoughts about the old system were correct (generally no matter how well we like the status quo there is something that is unsatisfactory about it) and that something is going to be done about. In the phase we generally expect the best and anticipate a bright future, placing our own construct system onto the change and seeing ourselves succeeding. One of the dangers in this phase is that of the inappropriate psychological contract. We may perceive more to the change, or believe we will get more from the change than is actually the case. The organisation needs to manage this phase and ensure unrealistic expectations are managed and redefined in the organisations terms without alienating the individual.

The happiness phase is one of the more interesting phases and may be (almost) passed through without knowing. In this phase it is the 'Thank Goodness, something is happening at last!' feeling coupled with the knowledge that we may be able to

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have an impact, or take control, of our destiny and that if we are lucky/involved/ contribute things can only get better. If we can start interventions at this stage we can minimise the impact of the rest of the curve and virtually flatten the curve. By involving, informing, getting 'buy in' at this time we can help people move through the process.

Fear

The awareness of an imminent incidental change in one's core behavioural system. People will need to act in a different manner and this will have an impact on both their self-perception and on how others externally see them. However, in the main, they see little change in their normal interactions and believe they will be operating in much the same way, merely choosing a more appropriate, but new, action.

According to Frances (1999), fear and threat are the two key emotions that will cause us to resist change.

Threat

The awareness of an imminent comprehensive change in one's core behavioural structures. Here people perceive a major change in what they believe to be their core identity or sense of self. The realisation that change will have a fundamental impact on who we are, how we see ourselves and what is key in our personality to us as individuals. This is the shock of suddenly discovering you're not who you thought you were! It is a radical alteration to our future choices and other people's perception of them as individuals. Their old choices are no longer ones that will work. In many ways this is 'road to Damascus' type of life-changing experience, one that has the potential to 'shake you to the core!'. In this phase, people are unsure as to how they will be able to act/react in what is, potentially, a totally new and alien environment – one where the 'old rules' no longer apply and there are no 'new' ones established as yet.

Guilt

An awareness of a dislodgement of our self from our core self-perception. We are not who we thought we were! Once the individual begins exploring their self-perception, how they acted/reacted in the past and looking at alternative interpretations they begin to re-define their sense of self. This, generally, involves identifying what are their core beliefs and how closely they have been to meeting them. Recognition of the inappropriateness of their previous actions and the implications for them as people can cause guilt as they realise the impact of their behaviour. Another of the emotions that may have an impact here is that of 'Shame', in Kellyian terms this is the awareness of a negative change in someone else's opinion of you from what you think it should be. The recognition of this shift in our own and other peoples opinion then leads into the next stage.

Depression

The awareness that our past actions, behaviours and beliefs are incompatible with our core construct of our identity. The belief that our past actions mean we're not very nice person after all! This phase is characterised by a general lack of motivation and confusion. Individuals are uncertain as to what the future holds and how they can fit into the future 'world'. Their representations are inappropriate and the resultant undermining of their core sense of self leaves them adrift with no sense of identity and no clear vision of how to operate.

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Gradual acceptance

Here we begin to make sense of our environment and of our place within the change. In effect we are beginning to get some validation of our thoughts and actions and can see that where we are going is right. We are at the start of managing our control over the change, make sense of the 'what' and 'why' and seeing some successes in how we interact - there is 'a light at the end of the tunnel!' This links in with an increasing level of self-confidence, which in Kellyian terms is defined as an awareness of the goodness of fit of the self in one's core role structure - i.e., we feel good that we are doing the right things in the right way.

Moving forward

In this stage we are starting to exert more control, make more things happen in a positive sense and are getting our sense of self back. We know who we are again and are starting to feel comfortable that we are acting in line with our convictions, beliefs, etc. and making the right choices. In this phase we are, again, experimenting within our environment more actively and effectively.

Disillusionment

The awareness that your values, beliefs and goals are incompatible with those of the organisation. The pitfalls associated with this phase are that the employee becomes unmotivated, unfocused and increasingly dissatisfied and gradually withdraws their labour, either mentally (by just 'going through the motions', doing the bare minimum, actively undermining the change by criticising/complaining) or physically by resigning. From personal experience I can say I've left a company where I found myself becoming increasingly disillusioned with them. My values and theirs were no longer matched and I felt the gulf too big to accommodate whilst still staying true to my construct system.

Hostility

The continued effort to validate social predictions that have already proved to be a failure. The problem here is that individuals continue to operate processes that have

repeatedly failed to achieve a successful outcome and are no longer part of the new process or are surplus to the new way of working. The new processes are ignored at best and actively undermined at worst.

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Denial

This stage is defined by a lack of acceptance of any change and denies that there will be any impact on the individual. People keep acting as if the change has not happened, using old practices and processes and ignoring evidence or information contrary to their belief systems. In many ways when we are faced with a problem, or situation, we don't want, or one that we believe is too challenging to our sense of self we 'constrict' or narrow our range of construction. In this way we eliminate the problem from our awareness. The 'head in the sand' syndrome – if I can't see it, or acknowledge it then it doesn't exist!

Anger

I have come to recognise over time that there seems to be some anger associated with moving through the transition curve, especially in the earlier stages as we start to recognise the wider implications of change. This is not always present as it seems to be depending on the amount of control people feel they have over the overall process and the focus of the anger changes over time. In the first instance, for those where change is 'forced' on them, the anger appears to be directed outward at other people. They are 'blamed' for the situation and for causing stress to the individual etc. However, as time progresses and the implications grow greater for the individual the anger moves inwards and there is a danger that this drives us into the 'guilt' and 'depression' stages. We become angry at ourselves for not knowing better and/or allowing the situation to escalate outside our control.

Complacency

It has also been suggested that there is also actually a final (initial stage?) of complacency (King 2007). Here people have survived the change, rationalised the events, incorporated them into their new construct system and got used to the new reality. This is where we feel that we have, once again, moved into our 'comfort zone' and that we will not encounter any event that is either outside our construct system (or world view) or that we can't incorporate into it with ease. We know the right decisions and can predict future events with a high degree of certainty. They are subsequently laid back, not really interested in what's going on around them and coasting through the job almost oblivious to what is actually happening around them. They are, again, operating well within their comfort zone and in some respects can't see what all the fuss has been about.

Check Your Progress

1. What do you mean by change management process?
2. What is the ADKAR change management?
3. Define unfreezing.
4. Explain the meaning of refreezing.

5.7 CHANGE MANAGEMENT TOOLKIT, PILOT AND BEST PRACTICES

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The change management toolkit is a structured approach for managing the portfolio of change. While organizations are facing more and more change each day, very few have a clear picture of what changes are going on across the enterprise, how they interact with one another and the consequences of the entire portfolio of change. Operating without this view might work for a short time, but eventually the organization will feel the strains of change saturation and collision of these many initiatives. The time has come for a structured approach and set of tools for understanding and managing the portfolio of change an organization faces. Prosci's Change Portfolio Toolkit provides a structured approach and set of tools for understanding, evaluating and managing your portfolio of change.

The Change Portfolio Toolkit enables you to:

- Inventory the change efforts underway in the organization
- Segment effected groups throughout the organization
- Map changes to the groups being impacted
- Collect a common set of data on each initiative
- Assess the risk and health of each change effort
- Create heat maps to illustrate change saturation
- Produce numerous plots showing the positioning of the portfolio
- Identify change efforts, groups and points in time at risk

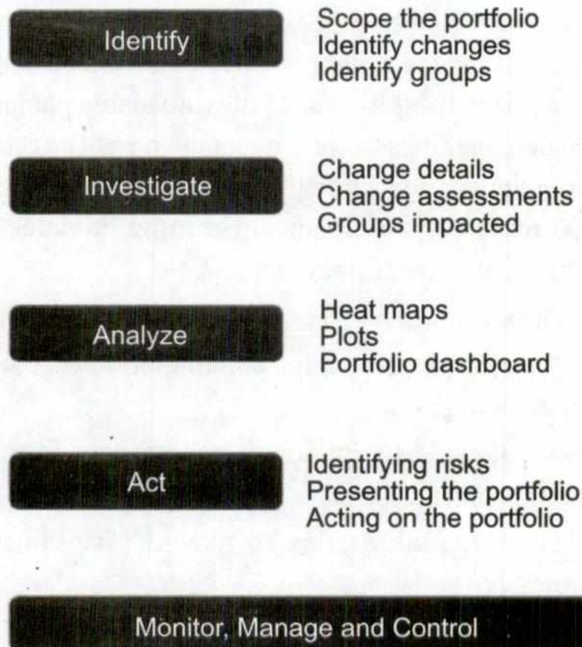


Fig. 5.3: Prosci Change Portfolio Management Process

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The centerpiece of the Change Portfolio Toolkit is a step-by-step process for making sense of the portfolio of change. The Prosci Change Portfolio Management Process goes beyond a simple list of the changes underway in the organization. With the process, you will develop a clearer picture of the overall portfolio and focus in on risks to projects, groups and the organization as a whole.

Primary tools in the Change Portfolio Toolkit:

- **Change Scorecard:** You will complete a Change Scorecard for each change in the portfolio. This simple one-page document captures the key details and assessment results for the changes in the portfolio.
- **Group Impact Matrix:** The Group Impact Matrix is a spreadsheet tool for evaluating and quantifying change impact and overall saturation levels for different groups in the organization.
- **Change Heat Maps:** Change Heat Maps are graphical representations of the impact a change has on different groups in the organization. When combined with the data from the Group Impact Matrix, an Organizational Heat Map shows the cumulative impact of change in the organization and high risk groups facing change saturation.
- **Portfolio Dashboard:** The Portfolio Dashboard is a snap-shot of the health and risks of the entire change portfolio.

5.7.1 Prosci Change Management Pilot

The Prosci Change Management Pilot Professional features Prosci's entire change management process and approach in web-based format. You can access any component of the methodology anytime, anywhere in less than four clicks. The Change Management Pilot Professional provides more than 200 pages of Prosci's popular Change Management Toolkit, over 25 downloadable planning templates and the complete set of change readiness assessments in an easily accessible web-based format. The tool also includes process drill-down capability, benchmarking results from more than 2,600 research participants, eLearning modules and ready-to-use change management presentations. Pilot elements:

- **CM Process:** The complete Prosci Change Management methodology, including step-by-step instructions for creating a strategy and implementing the change management plans.
- **Templates:** Downloadable templates in easy-to-use formats that you can customize for your project.
- **Assessments:** Downloadable files to use in formulating your change management strategy.
- **Presentations:** Five presentations to download and use with your organization.

- **Problem-solving:** Trouble-shooting guides for common problems in managing the people side of change.
- **Roles:** Definitions and responsibilities of participants necessary for successful change management.
- **e-learning:** Online tutorials for team members and managers to learn more about specific topics in change management, including best practices research, concepts and managers and supervisors—Guidelines and research to help managers with their critical role as coaches during the change management process.

This tool will enable you to:

- Have immediate access—no shipping required.
- Find anything in the Prosci Change Management Process within four clicks.
- Utilize the most up-to-date assessment tools to prepare a change management strategy.
- Create a comprehensive change management plan to implement your strategy.
- Integrate change management with project management to manage the people side of change, not just the technical side.

5.7.2 Best Practices in Change Management

Change can be a time of exciting opportunity for some and a time of loss, disruption or threat for others. How such responses to change are managed can be the difference between surviving and thriving in a work or business environment. Change is an inherent characteristic of any organisation and like it or not, all organisations whether in the public or private sector must change to remain relevant.

Change can originate from external sources through technological advances, social, political or economic pressures, or it can come from inside the organisation as a management response to a range of issues such as changing client needs, costs or a human resource or a performance issue. It can affect one small area or the entire organisation. Nevertheless, all change whether from internal or external sources, large or small, involves adopting new mindsets, processes, policies, practices and behaviour. Irrespective of the way the change originates, change management is the process of taking a planned and structured approach to help align an organisation with the change. In its most simple and effective form, change management involves working with an organisation's stakeholder groups to help them understand what the change means for them, helping them make and sustain the transition and working to overcome any challenges involved. From a management perspective it involves the organisational and behavioural adjustments that need to be made to accommodate and sustain change. Change can be a time of exciting opportunity for some and a time of loss, disruption or threat for others. How such responses to change are managed can be the difference between surviving and thriving in a work or business

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Prosci's 2012 edition of Best Practices in Change Management is a benchmarking report that will help you optimize your change management approach to achieve business results on change projects with real-world research. With data from 650 project leaders and change management practitioners representing organizations from 62 countries, you will learn what is working and what is not working in the field of change management.

Communication

Fundamentally it is people who make change happen – nothing moves forward without engaged, motivated stakeholders. Stakeholders are the people that are directly involved in and affected by the change project. Typically they are the organisation's workforce or those whose interests may be positively or negatively affected by the change including other agencies with whom the changing organisation partners, service providers, vendors, or the public. An organisation needs to engage its stakeholders, in order to implement changes effectively. To do that, stakeholders need to understand the reasons why the change is happening and its benefits. They also need to have an opportunity to express their views and contribute their own ideas about how it might be implemented. Even if the change is non-negotiable, cooperation and collaboration to achieve the change is more likely if stakeholders are involved and kept informed. Experience shows that approaching change in an open and consultative manner assists in more effective implementation. Accordingly, it is important that everyone in the organisation and those interacting with the organisation, both internal and external stakeholders, are kept informed and provided with messages and information that allow them to feel engaged, thus paving the way for involvement and adoption.

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Selected Strategies for Managing Change Communication

Lewis, Schmisseur, Stephens, and Weir (2006) highlight several general strategies to consider for communication during change initiatives.

- **Ask for input:** Participation is generally regarded as a key success factor during organizational change. Input can be obtained through a variety of processes including multi-stakeholder dialogue, listening sessions, and the establishment of planning teams.
- **Use informal networks and knowledge of key stakeholders:** Involving key stakeholders in the change process is important because they have access to important information from their networks that may be useful in determining how well the process is working and what challenges and difficulties exist. Key stakeholders can also influence the change process by disseminating information through their network and acting as opinion leaders.
- **Disseminate information:** Keeping stakeholders informed about the change process is critical. When disseminating information, it is important to use multiple methods for communicating the message as well as repeating the message consistently throughout the initiative. A variety of media may be used such as team meetings, email, newsletters, posters, public presentations, and websites.
- **Manage the style and content of communication:** Change messages need to be credible, clear, and motivational. Formal and informal organizational rewards should be structured to encourage and support the desired behavioral changes.
- **Create and communicate vision:** Visions should be clear, unambiguous, personally relevant, simple, and vivid.

Sponsorship

The success of change will depend, to a large extent, on how well the person with direct responsibility for the change manages it. Direct responsibility and accountability for the change must be clearly defined and accepted at an appropriately high-level within an organisation. In most cases this will be the person who has discretionary control over the bulk of the resources that will be expended in the change process. For a large and/or complex project, it may be a member of the senior executive. For small projects, a line manager may fill this role. For the purposes of this guide, this role is called the Change Sponsor.

High performing change organisations emphasise that the Change Sponsor must be readily identifiable no matter how small the change project, and they link the sponsor to the change from the outset ensuring his or her accountability through to completion. The Change Sponsor is ultimately accountable for the change and is responsible for exhibiting visible sponsorship and advocacy for the change effort, assessing and mitigating any resistance to the change, overseeing the business and

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project management issues that arise outside the formal business of the Steering Committee.

The sponsor's active and visible support of the change from initiation to completion is important to deal with the organisation's internal politics; to ensure that those who have a stake in the outcome continue to actively support the change throughout the process, and to build coalitions with others across the organisation to make the change successful.

Consequently the sponsor for a change effort should be someone who has sufficient authority, seniority, power, enthusiasm, and time to ensure that any conflicts that impede the change are resolved in a timely and appropriate fashion.

Typically the Change Sponsor is the chair of the Steering Committee. With the support of the Steering Committee, it is also the role of the Change Sponsor to gain commitment from the organisation's business owner(s) for any additional resources (outside the project budget) that may be necessary to achieve the required level of organisational change.

Resistance Handling

Resistance to change is one of the most difficult and potentially dangerous challenges a project team faces. Participants in the 2007 benchmarking study provided invaluable data on how to identify and manage resistance.

Identifying resistance

Participants were asked to identify what resistance to change looked like. The top responses were:

- Lack of participation: Lack of participation was most commonly seen in employees trying to outlast the change – waiting for it to "go away" like previously attempted changes. Study participants also observed groups of employees trying to be excused or exempted from adopting the new processes. Participants quote: "Same old, same old – this will go away like everything else has, just another 'flavor of the month'."
- Openly expressing emotion: Negative emotional expression took many forms including complaining, criticism, nitpicking, hostility, aggression, anger, frustration, excuses, low morale, bad attitudes, critical comments and openly expressing that the change would not work.
- Lack of attendance and absenteeism: Lack of attendance was seen in three different ways: not attending status meetings and project events, not attending scheduled trainings and being absent from work altogether.
- Reverting to old ways: Employees would ignore the new ways of doing work and find work-arounds.

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- A decrease in productivity and missed deadlines: A noticeable reduction in work output or delays could be observed.
- Ineffective methods for dealing with resistance.
- Participants cited the top five mistakes to avoid when managing resistance.
- Ignoring resistance and expecting it to go away on its own: Participants overwhelmingly cited ignoring resistance as the biggest mistake. Ignoring or avoiding resistance did not make it go away and in some cases made it worse.
- Not listening to and understanding the concerns of those impacted: Participants said that not understanding the root cause of resistance prevented them from responding to the real issues and led to the conclusion that all resistance is the same. This led to an ineffective "one-size-fits-all approach" to managing resistance. Next time, participants said they would not assume all behavior was a result of resistance, but instead would work toward listening to impacted employees and asking questions to understand the root causes and reasons for their behavior. Not gaining input from those impacted: Participants stated that applying force and pressure from the top down to implement a change was a mistake for managing resistance. This approach did not build the buy-in and engagement of those impacted and therefore made it difficult to manage resistance.
- Underestimating the resistance: Underestimating the resistance to change was cited as a significant mistake by participants because it resulted in a lack of planning for the change. This lack of planning was felt most significantly in the areas of building executive sponsorship and securing their involvement.
- Poor communication: Poor communication made managing resistance very difficult. Poor communication included inconsistent messages, incorrect messages, incorrect senders, bad timing and dishonest information. Participants also stated that using a public forum to confront a resistor was a mistake.

Teamwork

Successful change projects also typically appoint a dedicated Change Agent and team to provide day-to-day project management and support for the change effort. The Change team is responsible for planning, organising and coordinating the activities associated with the change including ensuring that the change management process addresses business process, workforce and infrastructure changes, and monitors implementation progress and risks. High level project management skills are essential. Another key responsibility of the Change Agent and team is the coordination of communications relating to the change - ensuring that information is shared with all relevant stakeholders. The Change Agent commonly reports through the Change Sponsor to the Steering Committee to escalate issues for discussion and decision. The number of resources that comprise a change team will be largely dependent on the size, scope and complexity of the change effort. For example a change team comprised

of representatives from each work unit across the organisation may be necessary to manage a large organisational change. In other situations it may just be the Change Agent alone or with one other resource. In other change initiatives, there may be a need for representatives from specialty business areas. The composition of the team may also change as the project moves through its various phases, with different skills required for different phases of the change. Clearly the Change Team's structure, composition and overall project management responsibilities would be determined in the planning stage, based on the scope of the change effort and the skills required to successfully complete the tasks, prior to embarking on the change project.

5.8 CONTINUOUS CHANGE AND IMPROVEMENT

Many of the companies in the Ashridge database work on this principle of continuous improvement (Kaizen as the Japanese call it), where it is recognized that the people doing the actual job have vast resources of talent and understanding which it is foolish to leave untapped. The heritage of Taylorism was that it segregated thinkers from doers instead of recognizing that the capacity to have ideas resided in every part of an enterprise.

5.8.1 Process Improvement Program

In order to continuously assess and improve the change management process, a process improvement program (PIP) must be implemented. This program must be:

- Formal
- Documented
- Continuous and periodic (various activities may have different intervals)
- Used by management for key business decisions

The goal of the PIP is to achieve the following critical success factors (CSFs):

- A repeatable process for making changes
- Make changes quickly and accurately (driven by business needs)
- Protect services when making changes
- Deliver process efficiency and effectiveness benefits

The main activities of the PIP are:

- Process measurement
- Process reporting
- Process assessment
- Process improvement

Process Measurement

Process measurement is performed on a weekly or monthly basis. During change management process design, a number of key performance indicators (KPIs) are established. The corresponding measurements are collected on a regular basis and are used for trending and summarizing (see the next section).

Process Reporting

Process reporting is performed on a monthly or quarterly basis. The report is intended for change management staff as well as management (service, IT, business). The report should present summary information in the form of a dashboard or a balanced scorecard, by rolling up collected KPIs. The report should include trend analysis and potential process issues. The "raw" data of periodic KPI measurements provides little value to management, but it can be included as backup information.

Process Assessment

Process assessment is performed on a semi-annual or annual basis. While improvement activities can take place anytime, it is important that a full formal assessment is carried out regularly. The assessment will cover people, process, and technology. The following tasks should be performed during process assessment:

- Audit a sample of changes for compliance to the process
- Audit the change management process for completeness, efficiency, and effectiveness
- Evaluate against the previous assessment period
- Benchmark against industry best practices
- Compare current status with CSFs
- Establish improvement actions
- Re-evaluate CSFs for next assessment period

Process Improvement

All the improvement actions established during process assessment must be documented in the PIP. The plan should list deliverables, due dates, implementation resources, and people responsible for completion. One useful technique for process improvement is the Deming cycle: Plan, Do, Check, Act.

5.8.2 Key Performance Indicators and Measurements

Change management must ensure that measures have specific meaning. Measures taken should be linked to business goals wherever practical-and also to cost, service availability, and reliability. Any predictions should be compared with actual measurements.

Meaningful measurements provide management with actionable feedback – those result in timely and accurate decision-making. For example, reporting on the number of changes is meaningless. Reporting on the ratio of authorized changes implemented versus RFCs received provides an efficiency rating. If this rating is low, management can easily see that changes are not being processed in an efficient or effective manner and then take timely action to correct the deficiencies causing this.

Some examples of the types of measures used within organizations are listed here. Most of the listed measures can be usefully broken down by category, organizational division, geography, supplier, etc.

Operational Metrics

- Number of disruptions, incidents, problems/errors caused by unsuccessful changes and releases
- Inaccurate change specifications (such as technical, customer, business)
- Incomplete impact assessment
- Unauthorized business/customer change by business/IT/customer/user asset or configuration item type, such as application data
- Percentage reduction in time, effort, cost to make changes and releases (for example, by service, change type, asset type)
- Service or application rework caused by inadequate change specification
- Percentage improvement in predictions for time, quality, cost, risk, resource, and commercial impact
- Percentage improvement in impact analysis and scheduling of changes safely, efficiently, and effectively reduces the risk of changes affecting the live environment
- Percentage reduction in unauthorized changes

Workloads

- Frequency of change (by service, business area, etc.)
- Volume of change

Process Measures

- People's satisfaction with the speed, clarity, and ease of use
- Number and percentage of changes that follow formal change management procedures
- Ratio of planned versus unplanned changes (urgent, emergency)
- Ratio of accepted to rejected change requests
- Number of changes recorded and tracked using automated tools

- Time to execute a change (from initiation through each stage in the lifecycle of a change, ending in completion).
    - By lifecycle stage
    - By service
    - By infrastructure platform
- Staff utilization
- Cost against budget

5.8.3 Example KPIs

The following KPIs can be used to measure the performance of the change management process. The next section indicates how KPIs relate to metrics and CSFs.

- Change efficiency rate
- Change success rate
- Emergency change rate
- Change reschedule rate
- Average process time per change (days)
- Unauthorized change rate
- Change incident rate
- Change labor workforce utilization
- Change management tooling support level
- Change management process maturity

The metrics above can be rolled up in key performance indicators (KPIs) and critical success factors (CSFs). The KPIs and CSFs can then be reported to management via the dashboard or balanced scorecard. For instance the KPI "change success rate" can be computed as:

"Number of failed changes" / "Total changes implemented"

5.9 ORGANISATIONAL CHANGES TO DEAL WITH WHIRLWINDS OF CHANGE

Most CEOs seeking to improve results do something about the organizational structure and culture of their enterprise. Organization is a matter of structuring the way in which resources are brought and kept together in order to achieve objectives. These resources include people, places, money, materials, and machines and so on, for a number of these may actually be needed in any particular type of change. Nevertheless the emphasis in organization restructuring and culture modification is not on the resources themselves, e.g. not on people as individuals, but on the way in which they are interlinked and mobilized, where the resources are positioned, how co-ordination is ensured and pattern of share beliefs and values created to give cohesion

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and provide the basis of behaviour in the enterprise (see definition of management). We would expect most changes to have some implications for the ways in which *resources and relationships are organized. Whether corrective action is being taken or opportunities are being seized, the organization' change will make a difference to the immediacy of reaching and speed of decision-making, information-sharing, communications and policy-implementation.

When economies are expanding, competition is tame, and revenues are growing, it's easy to confuse brilliant management with a bull market. Many entrepreneurs and managers are living proof of comedian and film director, Woody Allen's observation that "eighty percent of success is just showing up."

But most traditional organizations and management styles are now about as useful as tail fins, hula-hoops, and Nehru jackets. Here are the all too common bad habits, sloppiness, and problems that are seriously impeding the effectiveness of mediocre and failing organizations:

- Up to fifty percent of product features and services don't meet customer needs.
- Departmentalism (vertical management), turf wars, and fragmentation of production, delivery, and support processes limit growth and effectiveness.
- Customers are forced to dance the old familiar Bureaucratic Shuffle (the highly catchy chorus begins with "No, that's not my department").
- "Me-too" products and services play catch-up to missed market opportunities.
- The organization is composed of layers of coordinators, organizers, error correctors, complaint handlers, auditors, inspectors, approvers, directors, overseers, expeditors, assistants, managers, and "snooper visors."
- The workforce is disempowered, disconnected, and demoralized.
- Service/quality levels are inconsistent (and generally slipping).
- Production, delivery, and service support costs are stable or rising while revenues slip and other companies are lowering their per unit and per person overhead costs.

"Though forecasting specific events is futile, becoming conversant in the growing technical language and comfortable with the evolving conditions and events that shape the future is an increasingly essential part of what management is and does. Managers who don't make the effort, who don't learn, and who don't get comfortable with what needs to be learned will surely constrain their careers and hurt their companies." — Ted Levitt, Thinking About Management

Predicting the future is a dangerous business. Many economists, futurists, and other seers who've peered into their crystal balls and proclaimed what is to come, have learned to eat ground glass. It's difficult to predict the exact look and approach of those highly successful, 21st century model organizations that we'll be studying

in the years ahead. But the key elements of top performing organizations in today's environment are clearly emerging. When you scratch below the surface, you'll notice that these same characteristics have described many of our best-run companies for decades now:

- Clear identification and segmentation of key customer groups and their expectations. This is followed with rigorous measurements to provide feedback on progress toward meeting those needs.
- Permanent and continuous structural (rather than just "bad-times budgets") and overhead reductions that lower per unit and per person costs.
- Seamless structure and flow of work, information, products, services, and customers across the organization (horizontal management).
- A highly involved, team-based organization with few management and administrative levels.
- A sharp strategic focus (where we're going, what we believe in, what business we're in) and disciplined priority and objectives setting.
- Continuous streams of innovative new products, services, and extensions that expand and add new value or use existing products and services in new ways.
- Creating and leading new markets and exploiting growth opportunities.

5.10 CHANGE CHECKPOINTS AND IMPROVEMENT MILESTONES

Many paths lead to higher performance. The high performance route is individual and unique for every person, team, and organization. There is no one or best way. What works for me, or anyone else, may not work for you. We can't follow someone else's path. We need to blaze our own trail.

While no route is exactly the same, successful organization change and improvement efforts cover similar territory. Highly successful organizations have passed most of these change checkpoints and improvement milestones as they move toward ever-higher performance levels:

- Clear and compelling reasons for changing and improving
- Balanced focus on people, management, and technology
- Strong ethic of self-determination
- Comprehensive and balanced improvement model
- Clear and compelling picture of our preferred future
- Three or four core values
- Definitive statement of purpose, business we're in, or why we exist

NOTES

Check Your Progress

Fill in the Blanks

5. The .... is a structured approach for managing the portfolio of change.
6. The .... is a spreadsheet tool for evaluating and quantifying change impact and overall saturation levels for different groups in the organization.
7. The .... is a snap-shot of the health and risks of the entire change portfolio.
8. .... is one of the most difficult and potentially dangerous challenges a project team faces.

- Rich and continuous customer/partner performance gap data
- Intense exploring and searching for new markets and customers
- High levels of experimentation, pilots, and clumsy tries
- Robust process for disseminating team and organization learning
- Three to four strategic imperatives for each annual improvement cycle
- Direct links between all improvement activities and strategic imperatives
- Comprehensive and balanced improvement plan
- Improvement planning structure, process, and discipline
- Well designed, proven approach to process management
- Clarity on the preferred types and focus of all teams
- Well trained team leaders and members
- Intense levels of technical, management, and leadership skill development
- Simple customer/partner, innovation, capabilities, improvement, and financial measurements
- Active feedback loops that foster learning and improvement
- Flat, decentralized, and team-based organization structure
- Systems that serve and support customers and partners
- Extensive and continuous education programs
- Effective communication strategies, systems, and practices
- Partner-designed reward and recognition programs within a vibrant appreciation culture
- Strong development of change champions
- Support for local initiatives
- Annual progress reviews and improvement assessments
- Frequent celebrations of major breakthroughs and small wins
- Annual refocus and planning for the next year's improvement cycle

Management teams can use this list in a variety of ways. It could be a simple checklist for the development of improvement strategies and plans. They might have everyone on the team rate how well the organization and/or team is doing in each area now. Or they might have everyone rate the improvement urgency of each of these 31 areas. Another possibility is to have everyone do both rating exercises to provide performance gap data.

Case Study: Helping Employees Adapt to Change at Texas Children's Hospital by Stephanie Elam and Tammy Christensen, Texas Children's Hospital

Special guest authors for the Change Management Learning Center and winners of the 2009 Global Conference success story competition:

NOTES

Introduction

In 2006, Texas Children's began an aggressive $1.5 billion expansion project. The expansion includes the erection of four new buildings, and the addition of new service lines and programs, leading to a large increase in employee resources. By 2010, the organization is expected to grow from 6,600 to 9,000 employees and increase medical staff by 70. Simultaneously, the organization is transitioning from a paper to an electronic medical record system. This expansion initiative is considered to be the largest ever in the United States to be completed within a four-year window.

Project Background

Texas Children's has begun the implementation of an electronic medical record system that will provide immediate access to patient records and information across the organization, thus promoting improved patient care and patient safety while streamlining efficiencies. The electronic medical record will facilitate instant communication between the primary care and specialty services while also allowing on-going access to patient information for research purposes. The first phase of the project was deployed in two major business units in the organization, impacting approximately 6,000 employees or 85% of the workforce.

Change Management Overview

To assist with the "people side" of change associated with the system implementation, a change management team was created. Throughout the project, the change management team partnered with the project implementation team and organizational leaders to facilitate activities designed to reduce employee resistance and build commitment for the implementation. Two notable activities included creating a Change Agent Network and conducting dress rehearsal activities.

Local leaders selected individuals to make up a Change Agent Network. The network was comprised of participants from throughout the organization who served as extensions of the change management team as "on-the-ground" peer champions. The change management team provided network members with ongoing information, reminders, and tips which they shared with their peers. Periodic meetings and conference calls allowed change agents to connect with each other and exchange ideas about how to build commitment, as well as keep the change management team informed about issues and major areas of resistance that required attention.

In addition to the Change Agent Network, the change management team developed dress rehearsal activities to help prepare end users for the implementation. The activities were set up as real-life simulations and provided an opportunity for end users to walk-though and practice system and process

changes prior to implementation. The dress rehearsals were intended to help end users understand what to expect at Go-live and minimize anxiety. Additionally, the activities helped identify any potential "hiccups" that might not otherwise have been identified until the system went live, including incorrect end user security settings. Being proactive prior to Go-live was important because experiencing problems upon Go-live could have contributed to a mind-set that the system "didn't work" and created unnecessary resistance.

Measurement

To gauge end user commitment throughout the project, the change management team conducted four end user surveys:

- Baseline: Sent 6 - 8 months prior to Go-live
- Pre Go-live: Sent 2 weeks prior to Go-live
- Post Go-live: Sent 30 days after Go-live
- 90 Day Post Go-live: Sent 90 days after Go-live

Data from these surveys will be used throughout this case study to indicate where change management practices were effectively utilized and increased the success of the change.

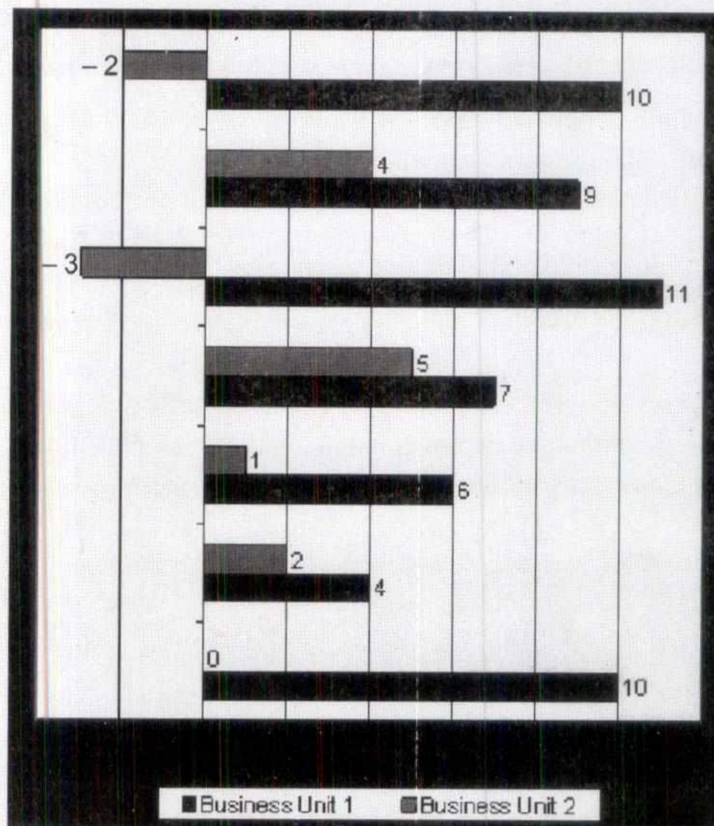


Fig. 5.4: Average Increase in Favorable Responses by Question

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The business units involved in the initiative had unique characteristics. Business Unit 1 had fairly standardized processes, and was geographically dispersed throughout the region. Business Unit 2 was centralized, but had vastly different processes between the many sub-units. These differences created a variety of implementation challenges. Overall the same basic change management strategy, processes and tools were available for each unit. The degree to which the change management practices were utilized by the unit's leadership team differed greatly. Comparative data gathered from the Post Go-live surveys of both units showed a significant difference in the average increase of favorable responses to key questions about the implementation.

This comparative data indicates the benefits of employing effective change management practices. It also suggests potential best practices, including the importance of appropriate end user engagement, leadership sponsorship, and dedicated, on-going support.

Strong Executive Sponsorship

During the planning phase of the project, Business Unit 1 demonstrated strong executive support and involvement in the project as a whole, and specifically the change management activities. The business unit's executive closely partnered with the change management team, discussing various change management ideas and concepts; tailoring tools and activities to better meet the needs of the business unit; and consistently participating in change management events and activities.

A clear example of her commitment was her sponsorship of the Change Agent Network. She publicly championed the network to leaders and staff. She appealed to her leadership team to seek volunteers and select individuals to participate in the network. She and local leaders supported the network by joining conference calls, participating in activities and personally thanking change agents for their time and commitment. This support proved to be critical to the successful operation of the Change Agent Network. Leadership from Business Unit 1 encouraged and held change agents accountable for fulfilling their responsibilities in the role, which ensured ongoing participation and follow-through.

Another clear example of this executive's support was her willingness to champion dress rehearsal activities. She conducted a careful review of the planned activities to ensure they were appropriate for each area, and required participation for all end users. The simulations depended on various roles working together to complete real-life tasks, and required a significant time investment. Some locations temporarily closed during dress rehearsals to ensure staff had adequate time and attention to devote to practicing and mastering the new skills required for the implementation. Following the dress rehearsals, the executive reviewed the status report from each site.

Feedback from Business Unit 1's leader specified the Change Agent Network and dress rehearsals were keys to the successful Go-live for her business unit. She noted the Change Agent Network increased end user engagement and helped keep end users informed by spreading key project messages. She also indicated the peer-to-peer communication was especially helpful in ensuring important messages were received and understood by end users. The visible sponsorship and participation of the executive sponsor enabled success of the activities by ensuring that leaders and end users understood the importance of managing change as well as their role in it.

Business Unit 2 implemented the new system two months after Business Unit 1. During the planning phase, leaders of Business Unit 2 were involved in the project at a high level, and their degree of sponsorship and support of change management was less visible to end users. Though the leaders agreed to engage in the same change management activities employed with Business Unit 1, they demonstrated less active support of the activities to the end users. The leaders complied with general requests, such as providing lists of users to participate in activities; however, few leaders reached out to the selected end users to show their support and encouragement, or participated in the various end user engagement meetings to demonstrate sponsorship. Throughout the phases of the project, Business Unit 2's end user participation in Change Management activities steadily decreased.

Though leadership from Business Unit 1 publicly advocated the necessity of dress rehearsals, most areas in Business Unit 2 failed to engage in the dress rehearsal process. Many leaders from Business Unit 2 failed to review the dress rehearsal activities or to check for applicability to their specific areas. Few made the activities mandatory or actively encouraged their staff to participate. Most neither held end users accountable for practicing for the Go-live, nor did they provide staff with adequate time to do so. As a result, the percentage of staff who participated in Business Unit 2's dress rehearsals was significantly less than the percentage from Business Unit 1, as seen in Figure 5.5 below.

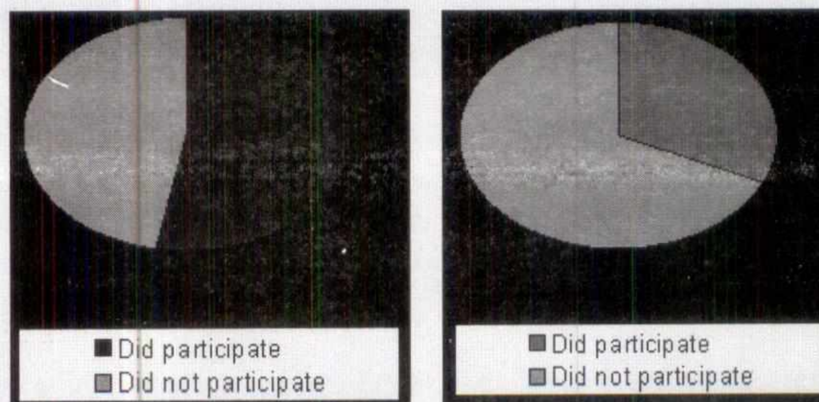


Fig. 5.5

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Analysis of the Pre Go-live survey for Business Unit 2 indicated that those employees who did participate in the Dress Rehearsals were more ready for Go-live than those who did not, as indicated by Figure 5.6 below.

Question: I have the skills and knowledge to effectively complete my tasks following the Go-live.

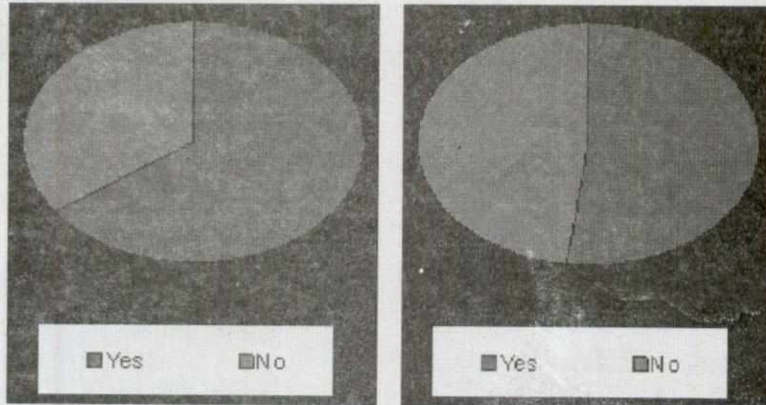


Fig. 5.6

In addition, a comparison between the Pre Go-live results for both business units showed that Business Unit 1 had significantly more favorable results than Business Unit 2. A greater percentage of end users from Business Unit 1 reported that they understood how the implementation was going to impact them (Figure 5.7), had the skills and knowledge to effectively complete their tasks (Figure 5.8), and were ready to Go-live with the new system (Figure 5.9). Additionally, end users from Business Unit 1 indicated higher levels of commitment to the project, as seen by the 17% difference in favorable responses between the two units to the question: I feel that the new system will work for me (Figure 5.10).

Question: I understand how the new system will impact my daily work.

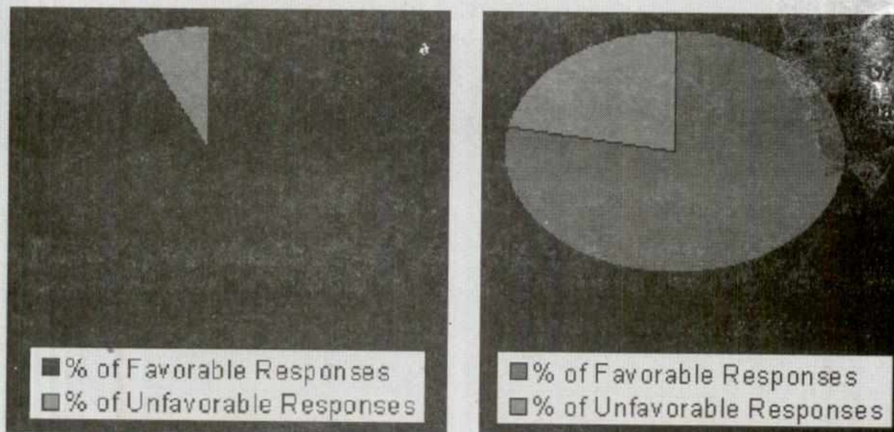


Fig. 5.7

Question: I have the skills and knowledge to effectively complete my tasks following the Go-live.

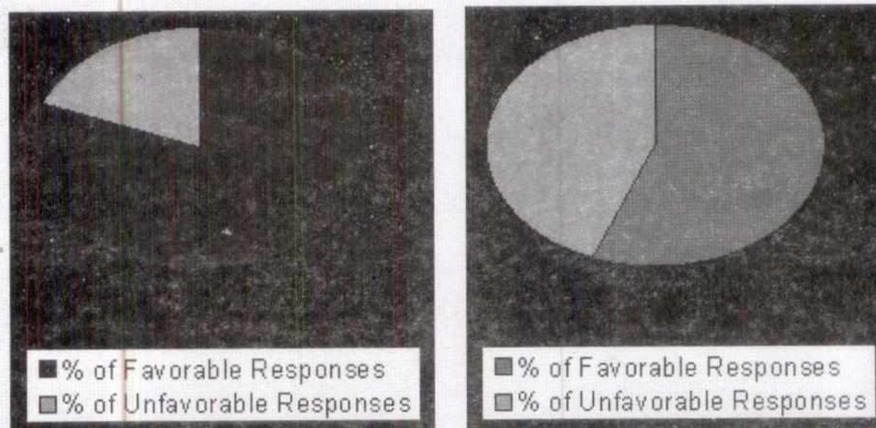


Fig. 5.8

Question: I feel ready to go live with the new system.

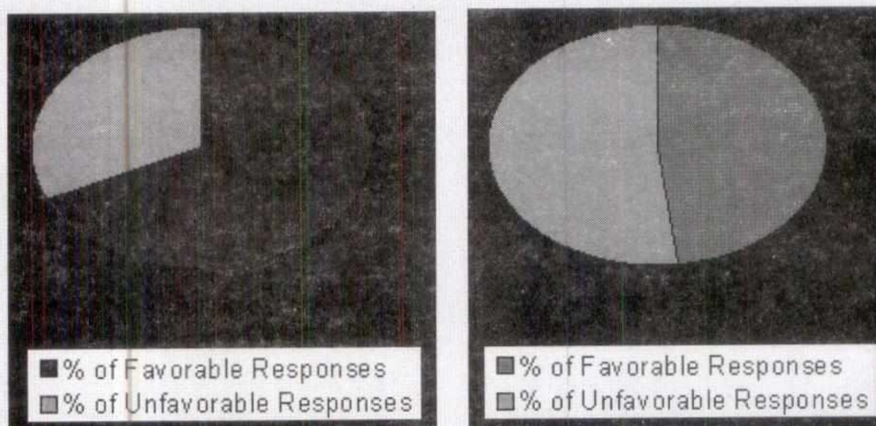


Fig. 5.9

Question: I feel that the new system will work for me.

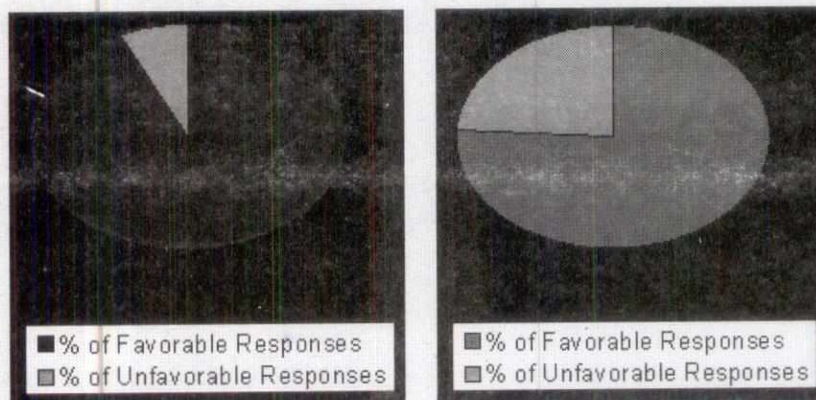


Fig. 5.10

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As demonstrated, data from the Pre Go-live surveys for both units indicate that the effective use of change management practices and leader sponsorship of the change activities in Business Unit 1 made a significant impact to the success of the project. The activities helped raise end user confidence and ability and increase end user commitment.

Commitment to End User Engagement

Leadership from Business Unit 1 also demonstrated a commitment to end user engagement activities throughout the project. They set up project road shows and individual visits by project team members to each impacted area prior to the Go-live. These visits allowed team members to gain understanding about specific site needs and considerations while personally connecting with end users. The visits also helped build excitement for the changes through demonstrations and informative conversations with end users.

In addition to site visits, the leadership team from Business Unit 1 ensured leaders and staff received on-going and frequent communications throughout the project. These tailored communications from business unit leadership provided key status updates and reminders. Additionally, online meetings were offered so that participants could attend virtually. These webinars were scheduled with leaders and staff throughout the project to ensure engagement and increase end user commitment. The webinars were used to provide on-going updates to end users, showcase top features of the software, and provide ad-hoc training as needed. These frequent communications helped end users feel more engaged and less anxious about the changes that were occurring.

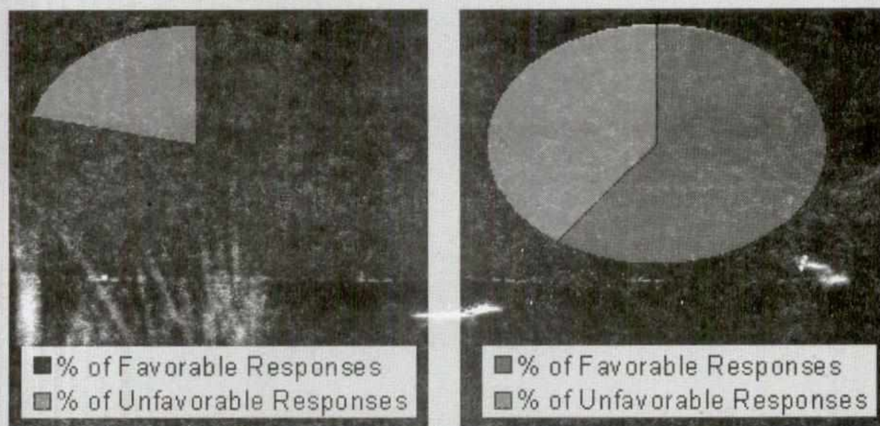


Fig. 5.11

In contrast, communications for Business Unit 2 were primarily project-driven; end users received general communications from the project team, but minimal information from local leadership. There was less active involvement from leaders of Business Unit 2 to provide updates and communications about what to expect and how to prepare. The importance of leadership commitment

to engagement and communications can be clearly demonstrated by the greater percentage of end users from Business Unit 1 who responded favorably to the question: I have sufficient information about the project in the Pre Go-live surveys. (Figure 5.11) This data further helps demonstrate the importance of active change management.

Question: I have sufficient information about the project.

Dedicated Support Team

Leadership from Business Unit 1 also demonstrated best practices following go-live through proactive end-user support. After the initial implementation period, end user support for Business Unit 1 transitioned from the project team to a dedicated support team. As a result, in the months following go-live, end users reported few concerns over the support process.

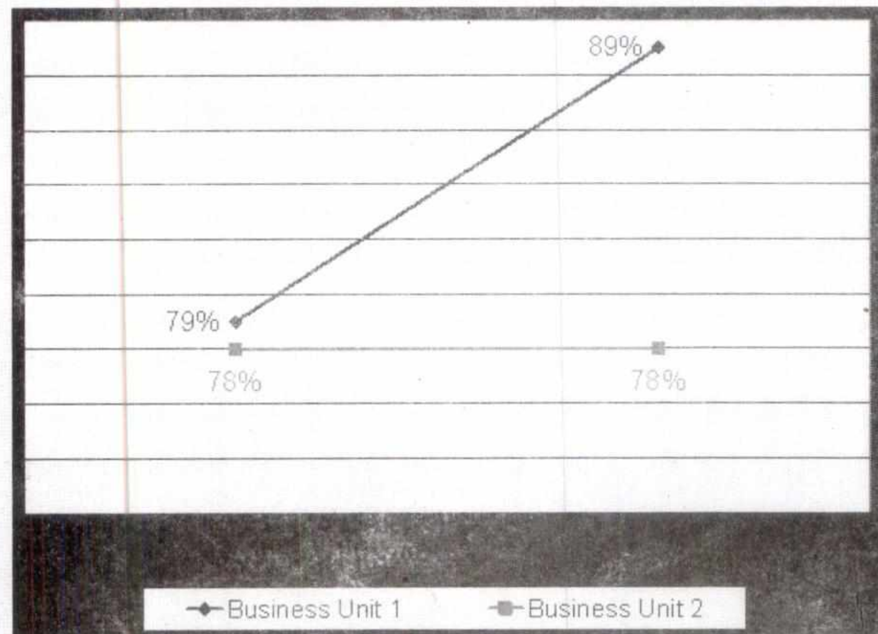


Fig. 5.12

To further support end users and build commitment to the change, following the implementation the executive and support team from Business Unit 1 held weekly calls with the sub-units. This allowed them to understand issues, share information and troubleshoot common problems. The executive actively followed up with sub-units who were not consistently participating in the calls to ensure they had the support they needed. Additionally, the calls coming into the support team each week were analyzed to determine top issues and provide further instructions and training to help reduce issue reoccurrence. An easy access, one-stop portal was designed to ensure end users could easily find instructions, troubleshooting material, and necessary updates. This proactive approach to

end user support following Go-live helped reduce end user resistance. The comparative results from the initial 30 day Go-live survey and the 90 day Go-live survey showed an increase in the percentage of end-users from Business Unit 1 who responded favorably to the question: I have been supported on the job after the implementation. (Refer to Figure 5.12 below)

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Though Business Unit 2 provided the same degree of initial on-site support for the implementation, post Go-live support calls were transitioned to the organization's general help desk rather than a dedicated support team following the initial implementation period. End users from Business Unit 2 reported that the Help Desk was not adequately trained for the transition and was not always effective in assisting with problems and questions. End users experienced long wait times and frustration since Help Desk team members often had to contact the project team to get answers. This resulted in delays in getting questions answered and problems resolved. The results from the initial 30 Day Post Go-live survey and the 90 Day Post Go-live survey for Business Unit 2 showed no improvement over time in the percentage of end users who responded favorably to the question: I have been supported on the job after the Implementation. (Refer to Figure 5.12 below)

I have been supported on the job after the IRIS Implementation.

Remedial Training

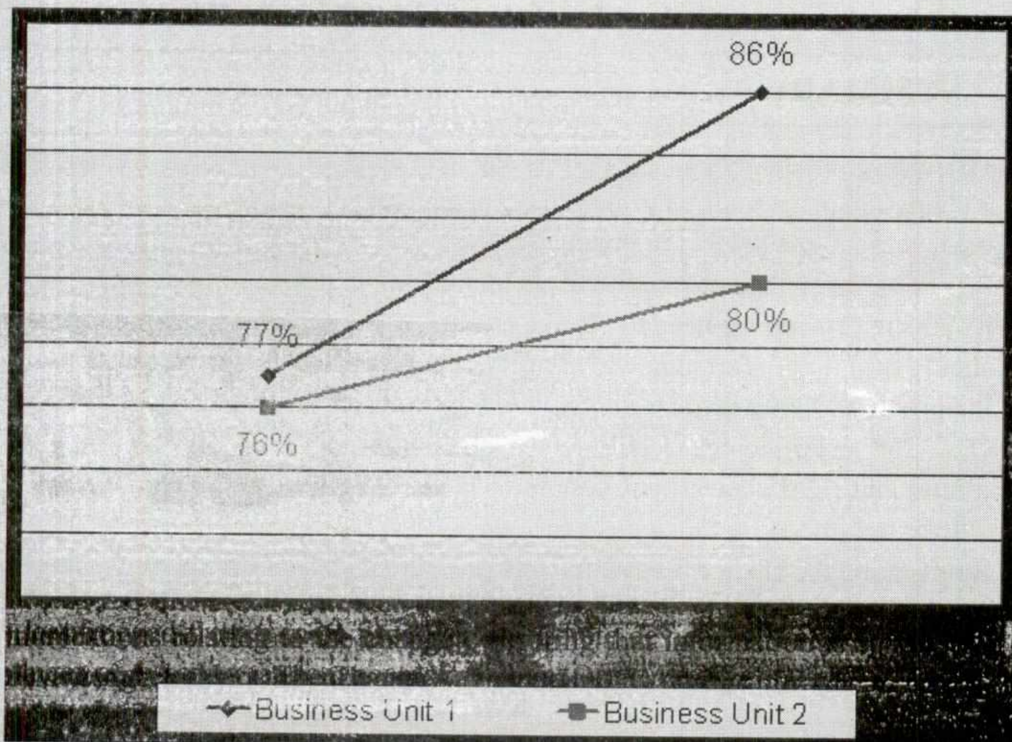


Fig. 5.13

To help ensure that end users were adequately supported in Business Unit 1, remedial training was offered on an ad-hoc basis following the implementation. Members of the dedicated support team visited various areas to ensure end users were performing activities correctly and provided coaching as needed. While end users still reported a desire for additional training, a greater percentage of end users responded favorably to the question: I can successfully perform my job using the new system than with Business Unit 2, where there was no dedicated support team to offer remedial training (see Figure 5.13)

I can successfully perform my job using IRIS.

Conclusion

Comparisons of data between the business units for the 90 Day Post Go-Live Surveys show that while favorable results for Business Unit 1 increased an average of 8%, results for Business Unit 2 only increased an average of 1% overall (see Figure 5.4) Through there are many possible reasons for the significant differences in improvement, the survey data for each business unit underlines the importance of effective change management practices on the overall success of the project. Specifically, a commitment to strong executive sponsorship, end user engagement, a dedicated support team, and remedial training were shown to be key components for ensuring a successful change.

Source: *http://www.change-management.com/tutorial-why-case-study.htm*

5.11 SUMMARY

- The change management process is the sequence of steps or activities that a change management team or project leader would follow to apply change management to a project or change.
- Preparing for change process involves identifying issues, environmental factors which are causing the need to change and any other accompanying data. There should be a lot of searching and identifying exactly what the real root cause to the problems being faced.
- Once the management is able to establish favourable conditions, the right timing and right channels of communication have been established the plan will be put into action.
- Reinforcing the change is essential to make sure it sticks. Maintaining a results orientation will be critical to your success. Simply doing change management activities is not enough. You must evaluate the results of these activities, determine the root cause of any gaps and implement corrective action.
- Lewin (1947) instituted a three-stage model of change which explained how to initiate, manage and stabilize the change process. The three stages of change, according to this model are, unfreezing, changing, and refreezing.

- Originally presented at the Tenth International Personal Construct Congress, Berlin, 1999, and subsequently developed in his work on constructivist theory in relation to service provision organisations at Leicester University, England, John Fisher's model of personal change - The Personal Transition Curve - revised again in Nov 2012 - is an excellent analysis of how individuals deal with personal change.
- The change management toolkit is a structured approach for managing the portfolio of change. While organizations are facing more and more change each day, very few have a clear picture of what changes are going on across the enterprise, how they interact with one another and the consequences of the entire portfolio of change.
- Change management must ensure that measures have specific meaning. Measures taken should be linked to business goals wherever practical and also to cost, service availability, and reliability. Any predictions should be compared with actual measurements.

5.12 KEY TERMS

- **Change management process:** A change management process is a series of business practices used to control and manage change within a large system or organization.
- **Unfreezing:** Unfreezing means that old ideas and attitudes are set aside to give place to new ideas. It refers to making people aware that the present behaviour is inappropriate, irrelevant, inadequate and hence unsuitable for changing demands of the present situation.
- **Refreezing:** Refreezing is on the job practice. The old ideas are totally discarded and new ideas are totally accepted. Refreezing reinforced attitudes, skills and knowledge. He practices and experiments with the new method of behaviour and sees that it effectively blends with his other behavioural attitudes.
- The change management toolkit is a structured approach for managing the portfolio of change.
- **Group impact matrix:** The Group Impact Matrix is a spreadsheet tool for evaluating and quantifying change impact and overall saturation levels for different groups in the organization.
- **Change heat maps:** Change Heat Maps are graphical representations of the impact a change has on different groups in the organization.
- **Portfolio dashboard:** The Portfolio Dashboard is a snap-shot of the health and risks of the entire change portfolio.

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5.13 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The change management process is the sequence of steps or activities that a change management team or project leader would follow to apply change management to a project or change.
2. ADKAR change management is one of many change management models which can assist in the development of a cultural transition program. It focuses on change at an individual level, and the specific needs of that individual, in order for that person to change their behaviours to the desired ways of working
3. Unfreezing means that old ideas and attitudes are set aside to give place to new ideas. It refers to making people aware that the present behaviour is inappropriate, irrelevant, inadequate and hence unsuitable for changing demands of the present situation.
4. Refreezing is on the job practice. The old ideas are totally discarded and new ideas are totally accepted. Refreezing reinforced attitudes, skills and knowledge.
5. Change management toolkit
6. Group impact matrix
7. Portfolio dashboard
8. Resistance to change

5.14 QUESTIONS AND EXERCISES

Short Answer Questions

1. What do you mean by preparing for change?
2. Define change implementation.
3. What are the key elements of change management toolkit?
4. What do you mean by continuous change?
5. What are the key change checkpoints?
6. Define sponsorship practice of change management.
7. State the importance of organizational change.

Long Answer Questions

1. What are the key steps of change management process? Discuss.
2. Discuss the Kurt Lewin's theory of change.

3. Write a note on Fisher's process of transition model.
4. What are the change management best practices?
5. Discuss the concept of organizational change to deal with whirlwinds of change.
6. What are the change checkpoints and improvement milestones?

NOTES

UNIT 6 CHANGE MANAGEMENT STRATEGIES AND LEADERSHIP

Structure

6.0 INTRODUCTION

Formulating the change management strategy is the first critical step in implementing a change management methodology. The strategy provides direction and results in informed decision-making throughout the change process. A well-formulated strategy really brings the project or change to life, describing who and how it will impact the organization.

The change management strategy also contributes to formulation of the rest of the change management plans. For instance, the groups identified in the strategy should each be addressed specifically in the communication plan. Steps for building and maintaining the coalition identified in the strategy are part of the sponsorship

roadmap. Each of the subsequent change management plans and activities are guided by the findings in the change management strategy.

Change as an organizational process has been studied within a behavioral science context for well over 50 years. Some of the early Western researchers in this area (including Kurt Lewin, Ron Lippit, Warren Bennis, Kenneth Benne, and Robert Chin) focused their early research on identifying the range of approaches used to guide and frame change efforts. In 1984, Chin and Benne authored an article summarizing what they saw as an overall framework cataloguing the then-utilized approaches to change management. The framework has remained an often cited guide to change practice and a useful tool for analysis of potential approaches to change strategy development. Within the Chin and Benne framework, the broad area of change management is divided into three "general strategies" (hereafter referred to as "meta-strategies") of change: 1) empirical-rational; 2) normative-reeducative; and 3) power-coercive. Each of these meta strategies approach the planning and implementation of change from different philosophical and practice-based sets of assumptions.

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6.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Describe the key change management strategies
- State the role of leadership in change management.

6.2 ELEMENTS OF CHANGE MANAGEMENT STRATEGY

The following are the key elements of change management strategy:

Situational awareness

- **Change characteristics:** Begin by understanding the change that is being introduced. Changes can be formalized projects, strategic initiatives or even small adjustments to how the organization operates. Understanding the characteristics of the change requires you to answer questions like: What is the scope of the change? How many people will be impacted? Who is being impacted? Are people being impacted the same or are they experiencing the change differently? What is being changed – processes, systems, job roles, etc.? What is the time-frame for the change?
- **Organizational attributes:** Next, work to understand the people and groups being impacted by the change. The organizational attributes are related to the history and culture in the organization and describe the backdrop against which this particular change is being introduced. What is the perceived need

for this change among employees and managers? How have past changes been managed? Is there a shared vision for the organization? How much change is going on right now?

- **Impacted groups:** The final step in building the situational awareness is developing a map of who in the organization is being impacted by the change and how they are being impacted. A single change – say the deployment of a web-based expense reporting program – will impact different groups very differently. Employees that do not have expenses to report will not be impacted at all. Staffs who travel once a quarter will be only slightly impacted. Associates who are on the road all the time will be more impacted, although filing expenses is only a portion of their day-to-day work. And for those in accounting who manage expense reporting, their jobs will be completely altered. Outlining the impacted groups and showing how they will be impacted enables specific and customized plans later in the change management process.

Supporting structure

- **Team structure:** The change management team structure identifies who will be doing the change management work. It outlines the relationship between the project team and the change management team. The most frequent team structures include 1) change management being a responsibility assigned to one of the project team members or 2) an external change management team supporting a project team. The key in developing the strategy is to be specific and make an informed decision when assigning the change management responsibility and resources.
- **Sponsor coalition:** The sponsor coalition describes the leaders and managers that need to be on-board for the change to be successful. Starting with the primary sponsor (the person who authorized and funded the change), the sponsor model documents the leaders of the groups that are being impacted by the change. The change characteristics will determine who must be part of the coalition. Each member of the sponsor coalition has the responsibility to build support and communicate the change with their respective audiences.

Strategy analysis

- **Risk assessment:** The risk of not managing the people side of change on a particular change is related to the dimensions described in the situational awareness section. Changes that are more 'dramatic' and farther reaching in the organization have a higher change management risk. Likewise, organizations and groups with histories and cultures that resist change face higher change management risk. In developing the strategy, overall risk and specific risk factors are documented.

- **Anticipated resistance:** Many times, after a project is introduced and meets resistance, members of the team reflect that "they saw that reaction coming." In creating the change management strategy, identify where resistance can be expected. Are particular regions or divisions impacted differently than others? Were certain groups advocating a different solution to the same problem? Are some groups heavily invested with how things are done today? Note particular anticipated resistance points depending on how each group is related to the change.
- **Special tactics:** The final step of the change management strategy is the identification of any special tactics that will be required for this particular change initiative. The special tactics formalize many of the learnings from the strategy development related to the change and how it impacts different audiences in the organization. Throughout the change implementation, special tactics may need to be revisited and updated.

6.3 RATIONAL VS. EMOTIONAL

Many leaders excel at building the rational case for change, but they are less adept in appealing to people's emotional core. Yet the employees' emotions are where the momentum for real transformation ultimately lies. Change management communications need to be targeted to each segment of the workforce, and delivered in a two-way fashion that allows people to make sense of the change subjectively. Change is really a people process, and people being creatures of habit are typically resistant to adopting new mind-sets, practices, and behaviors. To achieve and sustain transformational change, companies must embed these mind-sets, practices, and behaviors at every level.

Organizational change will be extremely difficult in most cases if managers rely only on making a case to the rational, analytical, problem-solving side of the brain. Instead, they must also make an emotional case for change and align the rational and emotional elements of the appeal. If you are asking people to adapt to a new reality, they need to understand the emotional case for the change so they can feel truly committed to the transformation. It can't be presented as another "program of the month" that they will have to live through. Bringing the details of what will change – and what won't – into the presentation allows leaders to paint a vivid picture of what the change means for employees personally, not only why it benefits the business.

The hard truth is that most change initiatives are done "to" employees, not implemented "with" them or "by" them. Although executives are pushing behavior change from the top and expecting it to cascade through the formal structure, an informal culture left to instinct and chance will likely dig in its heels.

NOTES

According to the Hughes Text, the rational approach increases follower dissatisfaction by pointing out problems with the status quo, systematically identifying areas of needed change. In contrast, emotional approach focuses on heightening the emotions of followers and empowers them to act on their vision (Hughes 2006, p.117).

This learner embraces the Emotional Approach to change in the sense that one distinct leadership characteristic they all share is charisma. Charismatic leaders are passionate, driven individuals who are able to paint a compelling vision of the future. Coleman, Boyatzis & McKee (2010) describe six styles of leading that have different effects on the emotions of the followers:

- The visionary leader
- The coaching leader
- The affiliative leader
- The democratic leader
- The pace-setting leader
- The commanding leader

Both approaches intend to drive organizational change; however, one excludes the other (Hughes, Ginnette, & Curphy, 2006). The differences between the two approaches appear to be as evident as the differences between leaders and managers. It seems that Managers with Leader's Soul, Brain, and Attitude is just a utopia, thus the concept cannot become more than just a blog's title (Bernal-Vallejo, 2012).

An effective leader should be able to play the role of a manager, recognize the problem, and identify the factors inhibiting or facilitating change (Collins, Good to great and the social factors: Amonograoh to accompany good to great, 2005). Driving organizational change requires of both managerial skills and leadership strategies. A leader is entitled to redesign the vision and mission of the organization, but it requires more than individual coaching and mentoring to successfully lead larger-scale change initiatives (Hughes, Ginnette, & Curphy, 2006). A transformational change needs of a leader with management skills, in other words, a Level 5 Leader (Collins, Good to great: Why some companies make the leap…and others don't, 2001).

However, since Level 5 Leaders are not common to find, the Emotional Approach is what would better mimic the outcomes. The Emotional Approach, also called the Charismatic & Transformational Leadership Framework, does not expect leaders with superhuman qualities, but it does follow closely the relationship between leaders and followers (Hughes, Ginnette, & Curphy, 2006). The leaders' rhetorical skills and their focus on trust building develops a sense of identification of the followers with the leaders' vision that increases feelings of empowerment and generates a willingness to subordination that strengthen the relationships between the members of the workforce towards the improvement of the overall productivity (Coghlan & Brannick, 2010).

Leaders, as well as the Emotional Approach, employ a personalized leadership strategy that guarantees the compliance of high standards, supports collaborative mechanisms, and commit to the achievement of preset high expectations. The Emotional Approach drives change by using their power and influence, personality, traits, coaching, planning skills, and knowledge of motivational techniques (Hughes, Ginnette, & Curphy, 2006).

However, if the leaders or the organization are not ready to move a step forward, either because they are not technologically prepared or economically strong to do it; the mere Emotional Approach is not going to be enough. If what is on table is just a short-term goal; who could play a better lead role in sustainability? The answer is simple: a manager and the employment of a Rational Approach. When there are not enough infrastructures to make big changes, or to transform the vision of an entire organization, it is better just to do things right.

The Rational Approach controls budget and costs, and administers the programs that leaders, often under the use of the Emotional Approach, previously developed. The problem starts when the managers, and because of their resistance to change, promote the failure of plans of action just because they interrupt the status quo (Coghlan & Brannick, 2010) (Hughes, Ginnette, & Curphy, 2006). This situation increases followers' dissatisfaction, and the inability to address the issues that originally began the change.

6.4 RE-EDUCATIVE VS. COERCIVE

Normative - Re-educative Strategy

Often, a cultural shift in the organization becomes imperative to adapt to market situations and survive competition. For example, your competitor may be producing twice your output because of their technological advancement, whereas you lag behind because you still rely on manual operations. This needs you to shift work culture from a manual to a technology-oriented people set, which in turn requires you to appropriately train and prepare people for the change. Normative - Re-educative Strategy is defined as a strategy that believes that norms in an organization can be purposely shifted to attain higher productivity, through collective people efforts.

Given that culture and norms quickly become a part of who you are, an initial resistance to anything non-conformist or maverick is quite expected. Ironically, norms and standards too are not constant over time. If they had been, evolution of society would never have been possible. Just like a stream of water that changes its course, when it meets a strong obstruction, culture and norms can also be re-established and re-defined.

This approach believes that changing the attitudes, values and culture leads to an automatic change in behavior. The very logic that makes initial resistance

to such change inevitable is used to explain how, over a period of time, this kind of a change tends to adhere. Thus, although it may be paradoxical, it is actually practically observable that once a new culture sets in, people instinctively feel the need to conform, simply in order to survive.

An important tool in initiating this change is the presence of a magnetic and dynamic personality, who can considerably influence people and their perspectives. This personality can be a leader, a change agent or most effectively, the CEO of the company. Given his visibility, prominence, credibility and authority in an organization, he possesses all that is required to effect a change.

While a culture change is possible, it is never immediate. For it implies considerable adjustments to the hitherto established thought patterns and mindsets. As a result, it can emerge only as an outcome of a gradual process. Hence, this strategy is applicable only if you have a longer time-frame at your disposal for enabling the change.

The Normative - Re-educative Approach is perhaps the most widely used strategy in present times. When using this strategy, it is important to remember that it is better to try and work through the existing culture, collaborating with people, and helping them see a new and better possibility, than to wake up one fine morning and replace it with a new culture. After all, you cannot change culture the way you change clothes, because it connects to a deeper part of you and how you operate. So, this approach calls for an honest endeavor to work in sync with people, identify problems and facilitate solutions. It should be directed towards improving problem-solving capacities, upgrading processes within a system, and fostering new attitudes, skills, and norms for people. While the bright side is that when your efforts engage people so much, chances of resistance are minimized. But on the other side of the coin, this approach is too dependent on employee cooperation. For instance, new software developed for a certain insurance company was found to be left unused even till months after, because the employees did not want to step out of the comfort of the "old way of doing things." Often, such a change involves unlearning and relearning, and while the change may ultimately trigger simpler solutions to their work problems, the transition phase comes as a real challenge, often leading to resistance.

This strategy could be used in conjunction with a change in the employee performance management systems that reward people who facilitate change and penalize those who oppose it. This may help to beat the resistance and build a more cooperative atmosphere. Further, since work culture falls as much within the domains of the formal organization as the informal organization. Therefore, a change to the work culture can succeed only if an amiable relationship exists between these two counterparts, or at least if leaders of the informal organization buy the proposed change.

Another perspective on this strategy tells us that while most of the time, individuals prefer to stick to established conventions; the story is different when

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people within the system are not happy with the status quo. This is a situation where people are actually looking out for change. In this scenario, the preliminary step that the management needs to take to trigger a change is to evaluate and clarify organizational norms and culture. This can be done through interactions, discussions and at a personal level, introspection by the employees of the organisation. So, more often, this strategy will intimately involve people in the "process" of change rather than have them face only the "impact" of change.

Hence, the normative-re-educative approach targets attitudes and values. It tends to produce long lasting changes as it usually involves group goals, group norms or common values. The reason is that once a new norm sets in, after being initiated either by the formal or the informal organization, it eventually becomes part of the system - "the way things are" - and therefore stabilizes over time.

Power - Coercive Strategy

This "classic" strategy bases itself in the power of "power". According to Hans Morgenthau:

"Power may comprise anything that establishes and maintains the control of man over man. Thus power covers all social relationships, which serve that end, from physical violence to the subtlest psychological ties by which one mind controls another".

Applied to our context, this strategy advocates "power" in the form of threat sanctions, and believes that people are, in general compliant, and will ultimately bow down to those who possess greater power.

At times, when the change is not radical but moderate, the company may also use subtler forms of power or hegemonic power to attain its objective. In fact, the Normative Re-educative Approach or the Empirical Rational Approach ultimately uses hegemonic power very subtly, to navigate through the change process. Hegemony is like an internalized form of social control, which makes us feel we are choosing when really we have no choice. The 20th century French Marxist Louis Althusser called this 'trick' as Interpellation.

In both these cases, when a change has been decided upon, people have no choice but to accept it. They may resist for some time, but ultimately must go with the flow. However, instead of using force, these strategies use "reason" and "collaboration" to make the "change situation" seem like a choice that will lead to a better situation than the status quo. So, while the idea that the change will lead to a prospective better situation is true, it is ultimately never open to choice. Hence, indirectly even these strategies use some form of subtler hegemonic power. However, the difference is that while these approaches secure the support of the people through logic or collaboration, hence ensuring that change endures and stabilizes over time, the direct use of imposing power, as advocated by the Power - Coercive Strategy,

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runs the risk that once the power is removed, people may revert to their original behavior.

But many times, exerting authority, subtly or otherwise, in the form of political and economic sanctions, legislation, policies, "moral" power etc. may seem the only way to bring about a change. This happens when people in the organization collectively fail to perceive a threat that is, in reality, grave and must be resolved within a restricted response time. Use of power may also be necessary when people become obstinate and intractable in the face of a change, which has lots at stake. So, people may become even during times of an exigency. The trick applied here is to have it your way and leave no other option for your people but to accept the change. While political sanctions usually reward non-conformists with imprisonment, economic sanctions curtail financial incentives to those who resist the change. Thus, the use of coercive power is an attempt to make people yield to change by inducing fear or using actual force.

However, the use of power may not always be negative. For instance, one power - coercive strategy uses the behavioral psychology concept of "the carrot and the stick". In this approach, power can be used to both reward employees who support change through financial incentives and punish those who don't with political or financial consequences, through sanctions. Thus, power can operate both ways.

The success of this strategy, however, depends on the general temperament of the organization.

Some organizations, as a part of their culture, believe in the authority of seniority, and appreciate the role of the hierarchy in issuing guidelines or directives for organizational development. If your people are attuned to a system of healthy authoritarianism, this may come easy. But in an organization where liberality has long been practiced, Hitlerian tactics will face resistance. Still, with Power-Coercive strategies, people have little option but to accept change, since most of these strategies use stringent policies, where impunity is ruled out. However, to ensure that the foundations of change are built on unanimity rather than repressed fear or dissatisfaction, it is important to evaluate the nature of your organization, the problem at hand and the time-frame at hand, before embarking on this strategy, as a last resort.

Robert L. Kahn observed that:

To say that A has the power to change B's behavior necessarily implies that A exerts some force in opposition to some or all of the previously existing forces [including B's own needs and values] on B. This is conflict....The exercise of [coercive] power, thus, necessarily creates conflict...

Thus, while the use of authority structures and threat sanctions can accomplish change, they may breed hatred and contempt for the organization or the senior management, which is harmful to the organization in the long run.

6.5 ADAPTIVE VS. ADOPTIVE

The Environmental-Adaptive Strategy, suggested by Fred Nickols, is built on the premise that while people innately resist change, they also eventually adapt themselves to it, when they are left with no choice.

Also known as the "die - on - the - vine" strategy, it takes its cue from the common observation that while individuals are quick to oppose change that they find threatening, they also have an innate ability to adapt quickly to a new set of circumstances. Applied to our context of organizational change, this human psychology translates to a strategy of first creating a new environment and then gradually moving people from the old to the new system. Thus, rather than proactively trying to "change" the organization by effecting a "change" in the behavior, processes, culture and norms of people, this strategy recommends that a new set of circumstances be created, and the innate nature of humans to eventually adapt be exploited, in letting the change "sink in". Therefore, in this strategy, the ball shifts court from the management to the people, as the responsibility of regularizing the change now lies on the people and how they adapt to the change. They practically have no choice to accept or reject the change, unless of course one prefers to quit the organization altogether. Here, the change is made, and the individuals merely adapt themselves.

This strategy is best suited for changes that are radical in nature rather than those that are gradual. Say, you want to introduce the SAP-HR system to increase efficiency and speed of HR related work. This is an incremental change that will happen over time, as your Business HR personnel gradually learn how to operate the new system and shift from the old manual practice to the new systematized process. If you were to use the Environment Adaptive strategy here, creating the environment and leaving them to adapt to it in their own way, the transition phase, very likely would stretch too long. This is because, your managers already operate within a framework that they are comfortable with, and so they may be reluctant to shift to a new system. Here, you might have to use a mix of the empirical-rational and the normative-re-educative strategies instead to change that comfort culture and enable them embrace the change.

Now, consider the example that Nickols gives, of a radical change handled in the Environmental-Adaptive way. Rupert Murdoch wanted to shift to an entirely new operating structure, on terms that were very different from the current one at Fleet Street. So, he set about quietly establishing an entirely new operation in Wapping, some distance away from Fleet Street. As soon as the new system became operational, he informed the printers at Fleet Street that he had some good news and some bad news for all of them. The bad news was that they would have to shut down their operations at Fleet Street. So, everybody was fired. The good news was that a new operation had jobs for all of them, albeit on very different terms.

Now, most people in this situation will embrace the new option - a radical change, tackled using the Environment-Adaptive strategy. Of course, the strategy is a mix of the empirical rational and power coercive strategies, and that is only a reinforcement of the fact that practical situations often need a mix of different strategies to effectively manage change.

Many years ago, my work took me to a slum infested area. I was pained to see the kind of life those people led, the abject poverty everywhere, the bowl that every child held out in his hand, not for food, but in the hope that a kind passerby may drop some alms.

A few weeks ago, I got the opportunity of revisiting the same place to run an education camp, and was pleasantly amazed at the buildings that stood in place of the slums - an obvious outcome of a rigorous rehabilitation program! It was only when I ventured inside that I realized, that barring the safer, better and more decent dwelling place to live in, nothing much had really changed. The litter was still around, the kids still ran about in the mud in tattered clothes and they still held out their hands for alms. The rehabilitation program had done well in shifting them to a new place, but perhaps something more remained to be done to have them live a new, more meaningful life. Their "homes" had changed, their way of life hadn't.

And to change that culture, they needed to be educated, to be shown that a better way of life existed, and existed within their reach. But even for that education to show its impact, I was now beginning to understand; I needed more kids like Jana, Neil and Don. Among the close to thirty kids I had been asked to supervise, there were only these three who were genuinely interested. The rest were happy with their life, as it was.

The above incident links to an important factor that you must conside. before using this strategy. Ensure that you have at least a few capable, influential and probably "non-conformist" employees, in your organization, who will embrace the change and drive the others. These are your "seed" employees - people who will foster a new and more effective work culture in the newly established setup. Correspondingly, Nickols uses the term "bad apples" to refer to people from the old culture, which are detrimental to the new culture and must be done away with.

If there is no buy-in on the change, at-least at the "seed" level, the strategy may not work. Rather, it may lead to a situation where you have a new workplace that continues to work in the old manner and follow the old culture. Effectively then, there hasn't been much change.

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indepth understanding of how top management can steer organizations through the demands of changing economic environment and "Disruptive Innovation -What Every Business Leader Should Know" another potential bestseller which uncomplicatedly answers every question that senior management and executive leadership of any company might have on Disruptive Innovation - one of the most powerful tools that can aid businesses in meeting their strategic objectives.

6.6 GRADUAL VS. SUDDEN

"While change and uncertainty have always been a part of life, what has been shocking over the last year has been both the quantum and suddenness of change." While delivering a speech at the Indian Institute of Management, Ahmedabad, Azim Premji, chairman of IT giant, Wipro said, "For many people who were cruising along on placid waters, the wind was knocked out of their sails. The entire logic of doing business was turned on its head. Not only business, but also every aspect of human life has been impacted by the change. What lies ahead is even more dynamic and uncertain. I would like to use this opportunity to share with you some of our own guiding principles of staying afloat in a changing world. This is based on our experience in Wipro. I hope you find them useful." First, be alert for the first signs of change. Change descends on everyone equally; it is just that some realize it faster. Some changes are sudden but many others are gradual. While sudden changes get attention because they are dramatic, it is the gradual changes that are ignored till it is too late.

You must have all heard of the story of the frog in boiling water. If the temperature of the water is suddenly increased, the frog realises it and jumps out of the water. But if the temperature is very slowly increased, one degree at a time, the frog does not realise it till it boils to death. You must develop your own early warning system, which warns you of changes and calls your attention to it. In the case of change, being forewarned is being forearmed.

Second, anticipate change even when things are going right. Most people wait for something to go wrong before they think of change.

It is like going to the doctor for a checkup only when you are seriously sick or thinking of maintaining your vehicle only when it breaks down. The biggest enemy of future success is past success. When you succeed, you feel that you must be doing something right for it to happen.

6.7 PIECEMEAL VS. HOLISTIC

Rather than sporadic and episodic, we imagine change as piecemeal, ongoing. Small increments arise from a vision of what is wanted in the organization. Requires feedback and reflection--and hence visibility and transparency--in order to correct

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small errors and make small improvements as we go. Rather than large, disruptive Change (with a capital C), we start with something small, and grow, in small increments, from there.

A staircase sequence of small change moves, each small move followed by a 'baking-in' period. During this 'baking-in' period, we observe and reflect on what happened, in preparing for the next move.

Piecemeal growth implies a change process that is emergent, rather than planned up-front. While the vision for where we're going may be known a priori , the path itself emerges as we traverse it. This allows us to learn as we go. Again, this requires transparency and visibility. Without this, there can be no Emergence. Composition (planned change) converges with execution (actions taken, discoveries made).

Emergent Piecemeal – Every system (team, unit) is embedded in a larger whole. It is all too common to optimize locally (e.g. our unit, our team, our functional group) at the expense of the whole. Change process and activities involve all management layers. Working together to see the whole, even as it also is emerging. Incremental and emergent change processes must be ever-mindful of the larger wholes that are affected.

Each reflection takes in the greater whole of the organization. Initially, we start with a smaller part of this whole. Then, as we proceed, we encompass a little more of that whole.

6.8 PARTICIPATIVE VS. COTERIE

In participative strategy all the individuals within the organisation are fully involved in the change process. Though the major decisions are taken by the to, level management, the change process is driven more by groups or individuals within the organisation. Discussions and meetings are held and the views of all the individuals are taken into account before affecting the changes. Thus the focus is on the full involvement of all who are involved in, and affected by the proposed changes. The views of consultants and experts are also sought to facilitate the change process. The major advantage of this strategy is that it allows for the participation of all the individuals involved in the change process. The changes implemented by the management get the support of all those affected. The individuals are provided an opportunity to increase their skills and knowledge about the organisation as a whole and its functioning. The main disadvantage of this approach that it takes longer to decide the major changes to be implanted, thus it is relatively slow to implement. It can also be costly and time consuming owing to the number of meetings that take place. Moreover, it is also not possible to predict the possible outcomes. This strategy is more complex to manage and requires more resources and costs. These strategies are not independent or mutually exclusive. Depending on the situation and the changes to be affected, a range of strategies can be employed to implement

the changes in an organisation. Effective change management involves assessment and monitoring to recognise what strategy/s to employ, when, where and how to use them in order to be most effective.

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6.9 TOP-DOWN VS. BOTTOM-UP

It is often the case that companies are faced with a dilemma about whether the change initiatives must be driven from the top or they should be organic from the bottom-up. This is especially the case with organizations that are growing in size where the increased employee base or the skyrocketing sales and revenues mean that the top management's scope of control is more and hence driving change from the top alone might not just work. And for those organizations that initiate change from the top, they might find themselves in a situation where the middle and bottom layers of the organizational hierarchy may not be responsive or energized in the way the top management wants them to be. So, the existential questions as to whether there ought to a spontaneous involvement from all the levels, or whether the top management must induce the change, are very real and need to be answered for change initiatives to succeed.

The answer as to which option is preferable depends on a number of factors. First, any change initiative would succeed only if it is communicated appropriately and to all levels. Honest, transparency and feedback loops must be the elements of the change initiative. Next, the employees ought to have a voice in the way the change initiative is managed. For a change initiative to be successful the top management has to communicate and the employees have to respond. Like bees gathering around honey and being driven by the Queen Bee, organizations have to ensure that while the CEO or the other top managers initiate the change, employees at all levels must take to the change as well. So, a mix of having the top management initiate the change and letting the employees take over from them works best for larger organizations where micro management by the top management might not work.

Examples of organizations that have embraced change successfully include 3M, Google and Facebook where the visionary leaders at the top ensured that the initial germ of an idea was seeded in the employees and then they let the trees grow by sampling nourishing them from time to time while at the same time preferring organic growth rather than transplanted growth. The other extreme is marked by failures like HP where the top management was unable to make their employees buy into their change strategies. Of course, this is not to say that organizations need visionary leaders as essential elements of success. Though it helps, companies can make do with success if they have a combination of people enablers who take pride in their organizations and can empower the employees to participate in the change initiatives.

In conclusion, change can be driven solely from the top. However, for continued success, change has to come from within each employee and this can only happen in

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organizations that have an organizational culture that encourages each employee to contribute to the initiatives. Change can thrive where there is an institutional catalyst and hence the key takeaway is that the organizational structures have to be built in such a way that no one individual can either make or mar the chances of success.

6.10 SUCCESSFUL CHANGE FLOWS FROM LEARNING, GROWTH AND DEVELOPMENT

"Leaders in learning organizations are responsible for building organizations where people are continually expanding their capabilities to shape their future — that is — leaders are responsible for learning ." (his emphasis) — Peter Senge, The Leaders New Work: Building Learning Organizations

Change can't be managed. Change can be ignored, resisted, responded to, capitalized on, and created. But it can't be managed and made to march to some orderly step-by-step process. However, whether change is a threat or an opportunity depends on how prepared we are. Whether we become change victims or victors depends on our readiness for change.

One of the inspiring quotations I've used for my ongoing personal improvement quest came from Abraham Lincoln (his decades long string of failures in business and politics before becoming one of America's great presidents is inspiring in itself). He once said, "I will prepare myself and my time must come." That's how change is managed.

We can't crash cram in a few days or weeks for a critical meeting or presentation that our key program, project, or even career depends upon. We can't quickly win back customers who've quietly slipped away because of neglect and poor service. We can't suddenly turn our organization into an innovative powerhouse in six months because the market shifted. We can't radically and quickly reengineer years of sloppy habits and convoluted processes when revolutionary new technology appears.

When cost pressures build, we can't dramatically flatten our organizations and suddenly empower everyone who's had years of traditional command and control conditioning. These are long-term culture, system, habit, and skill changes. They need to be improved before they're needed. In the words of an ancient Chinese proverb, "dig a well before you are thirsty."

Problems that our team, our organization, or we may be having with change aren't going to be improved by some "change management" theory. To effectively deal with change we don't focus on change as some kind of manageable force. We need to deal with change by improving ourselves. Then our time must come. Successful change and continual improvement go hand in hand.

In his book, *The Age of Unreason*, London Business School professor and consultant, Charles Handy writes: "If changing is, as I have argued, only another word for learning, the theories of learning will also be the theories of changing.

Check Your Progress

1. What are the organizational attributes?
2. Define sponsor coalition.
3. What is piecemeal change?
4. What is a participative strategy?

Those who are always learning are those who can ride the waves of change and who see a changing world as full of opportunities rather than of damage. They are the ones most likely to be the survivors in a time of discontinuity. They are also the enthusiasts and the architects of new ways and forms and ideas. If you want to change, try learning one might say, or more precisely, if you want to be in control of your change, take learning more seriously."

Resistance to today's change comes from failing to make yesterday's preparations and improvements. When our teams, our organizations, and we fail to learn, grow, and develop at the speed of change (or faster), then change is a very real threat. If change finds us unprepared, it can be deadly.

Case Study on Business Strategies: Kodak's Transition to Digital

Kodak is one of the oldest companies in the photography market, established more than 100 years ago. This was the iconic, American organization, always on the position of the leader. Its cameras and films have become known all over the world for its innovations. Kodak's strength was it brand - one of the most recognizable and resources, that enabled creating new technologies. Since the formation of Kodak, the company has remained the world's leading film provider with virtually no competitors. That is until the arrival of Fuji Photo Film, which now surpasses Kodak in earnings per share and is viewed as the industries number two. It is evident that there has been a significant shift from the use of traditional film cameras to a market fully fledged and saturated with modern and updated digital cameras and digital photographic tools.

However, over time, the situation started to change for Kodak, as it has underestimated the changes in the market. There has been a significant shift from the use of traditional film cameras to a market fully-fledged and saturated with modern and updated digital cameras and digital photographic tools. The age of digital technologies as emerging. The core business of Kodak-the film business, started to decline and some areas of the business started to be less profitable and filled with many competitors, especially cheap ones from Asia. Also, the prices of the digital cameras were falling.

Eastman Kodak is divided into three major areas of production.

- Kodak's Digital and Film Imaging Systems section produces digital and traditional film cameras for consumers, professional photographers, and the entertainment industry.
- Health Imaging caters to the health care market by creating health imaging products such as medical films, chemicals, and processing equipment.
- The Commercial Imaging group produces aerial, industrial, graphic, and micrographic films, inkjet printers, scanners, and digital printing equipment to target commercial and industrial printing, banking, and insurance markets.

Issues and Challenges

The main issue behind this case is the problems faced by the Eastman Kodak Company in the process of changing to Digital technology in printing. It failed to establish market share and market leadership in the Digital sector. It is threatened with either immediate or rapid diversification in technology. Kodak has been extremely successful over the last century in film sales and film development. Now the time has come for the Eastman Kodak to respond to the challenges of digital cameras and also contemplate other issues as follows:

- Will the company's current strengths and capabilities make Kodak as, "The Picture Company"?
- How serious are the weakness and competitive deficiencies?
- Does the company have attractive market opportunities that are well suited with Kodak's resources? Does it have the internal resources to continue spending money investing in new technology?
- What type of strategy should it use to enter the digital camera business and how will Kodak leverage its strategic resources?
- Should it continue to research and produce digital camera technology alone, or look for partners?
- How will it cope with their existing and new competitors and how will it build a strategic advantage over other companies? Can Kodak once again dominate the world market?

What Went Wrong at Kodak?

Kodak started facing difficulties in 1984, when the Japanese firm Fuji Photo Film Co. invaded on Kodak's market share as customers switched to their products after launching a 400-speed color film that was 20% cheaper than Kodak's. Secondly, during 1980s the company failed to recognize the change in the environment and instead followed and stuck on to a business model that was no longer valid for the post-digital age. After the management realized the change and reacted accordingly but it was too late.

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Kodak's Strength

Kodak's strength can take several forms as follows:

- **Valuable intangible assets:** Kodak's strengths were its brand equity and distribution presence. After almost a century of global leadership in the photographic industry, Kodak possessed brand recognition and worldwide distribution. Kodak could bring new products to consumers' attention and to support these products with one of the world's best known and most widely respected brand names as a huge advantage in the market where technological change created uncertainty for consumers. Kodak's brand reputation was supported by its massive, worldwide distribution presence – primarily through retail photography stores, film processors, and professional photographers.
- **Competitive Capabilities:** Prior to 1990s Kodak had invested hugely in R&D. Moreover, its century of innovation and development of photographic images gave Kodak tremendous depth of understanding of recording and processing images. Central to Kodak's imaging capability was its color management capability. In the digitizing color and transferring digital images to paper, Kodak possessed a powerful set of complementary technologies in sensing, color management and thermal printing.
- **Market advantage:** Through its wider distribution network, it has been able to maintain a huge market coverage and accessibility. It had worldwide distribution presence – primarily through retail photography stores, film processors, and professional photographers.

Company's Competence and Competitive Capabilities

- **Competency:** Eastman Kodak has been leveraging competencies in film and paper media, color management. It has been known for the best quality films and cameras worldwide. Its journey of more than 100 years has helped to gain the experience and excel in its endeavour. The organizational changes like decentralization and accountability that George Fisher made helped increase speed of manufacturing and product development i.e. short product development cycles. Secondly, a strength could be also considered Kodak's favorable corporate image (and implicitly a significant brand equity) that results from the values which are said to lead the staff's behaviors ("respect for the dignity of the individual, integrity, trust, credibility, continuous improvement and personal renewal, recognition and celebration"), a transparent management which allows shareholders to have a realistic and up-to-date image of the operations performed, strong Human Resources policies and commitment to the community.

- **Core Competency:** Eastman Kodak was a highly integrated company that did its own R&D and manufactured its own parts. Changing global markets and cost pressures in the 1980s and 1990s threatened the way of doing business. So the knowledge, company's intellectual capital are also affected and repercussion is proficiency in its core competency started to diminish. George Fisher, CEO in 1993, refocused the company on core competencies and joined the trend of outsourcing with close relationships to suppliers and announced a new explicit social contract as part of the restructuring effort. By 1997, the company could not grow out of its competitiveness problems like major price competition from its biggest international competitor, Fuji, which was engaged in a major price-cutting campaign aimed at increasing its market share internationally and particularly in U.S. markets. In response, Kodak made more significant changes designed to reduce its costs and to recapture market share in the company's core products. But all these attempts only lead to decrease market share and declining profit.
- **Distinctive Competency:** Firstly, the brand image of the company that has been built since a century is the distinctive competency for Kodak. Before the digital age, its distinctive competencies were film and cameras and its sister concern for its chemical technology.

Strategies of Eastman Kodak

- Vertical integration combined with continuous innovation and product development. Speed is also required cutting cycle times in manufacturing and product development.
- To systematize and accelerate product development and improve product-launch, quality, Kodak introduced a new product development methodology called "Manufacturing Assurance Process"(MAP).
- Joint venture with HP, Microsoft to introduce new products required in the market. Collaborate with experts to enhance competency.
- Digital strategy was to create greater coherence among Kodak's multiple digital projects.
- Previously they had a diversification strategy but later Fisher focused on the imaging business.

Source: *Scribd.com*

6.11 LEADERSHIP PRINCIPLES IN A CHANGING WORLD

One of the most quoted examples of bringing about transformation in an organisation is that of Lee laococca, Chairman of Chrysler Corporation who brought a turnaround

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in his company from bankruptcy to profitability. Apart from 'trimming the fat' among the managerial staff, he changed the company's cultural values from that of feeling losers to feeling winners. He used internal communication system and advertisements to reinforce these changes.

The role of a leader is to facilitate change that helps in improving organisational performance. But the challenge before a leader is how to be effective in the face of dissatisfaction, discomfort, dislocation and increased stress among people. Various organisations adopt various strategies. One of the well known model of change has been given by Kurt Lewin. The model advocates that change goes through three processes:

Unfreezing movement ⟶ To a New State ⟶ Refreezing

Each of these phases is extremely important and requires the leader to take concrete steps. Unfreezing involves breaking away from the way things have been done in the past. Movement to the new stage involves identifying and trying innovative ways to do things or doing new things. Refreezing involves stabilising and reinforcing the new ways or new things to do.

Kurt Lewin's second change model provides an interesting framework for expediting the acceptance of the change process. His force-field model describes that majority of the situations exist in the form of dynamic equilibrium. He believes that the balance would exist only when forces driving change are counterbalanced by the forces restraining change. This model also acts as a reality check.

Driving Forces ⟶ Present Balance ⟶ Restraining Forces

The management can take action in favour of change in the form of behaviour modification and providing training opportunities. Alongside management needs to knock down or eliminate barriers that prevent people from accepting change. As far as possible the environment ought to be such which is free from punishment or negative feedback. The management can judiciously try both the approaches to bring about change. Change leaders require taking the following actions.

Establishing Relevance

It is not enough for the management to create a sense of urgency but in order to get high level of commitment from employees they need to see the relevance of change. In other words managers need to get into the shoes of employees and see from the employee's perspective about the impact of change.

Jack Welch in his efforts to bring about change at General Electric (GE) put forth before the workers the view point that employees needed to learn new skills not for life time employment at GE but to acquire employable skills with which they could find job as well when the skills were not required at GE. In other words he presented the concept of change as an investment by the employees in their future employability and not merely a means of improving GE's performance.

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Asking Right Questions

The starting point of any change process is inquiry, which means asking relevant and strategic questions. People are also required to visualize the future and identify various possible scenarios. One of the methods to take initiative could be benchmarking against the best practices or the set up internal benchmark to improve performance. The people are more likely to commit themselves to the new realities when they realize that the changes are inevitable or certain changes are possible.

Changing the Mindset

Transforming individuals can bring about organisational transformation. The process starts with changing oneself. The change master requires candid self-appraisal and see if he has the qualities– the flexibility and understanding. It is important because every word spoken or every action taken by the change leader either reinforces or undermines the change efforts. Having done that he needs to create an environment, which is conducive to bringing about change.

Declaring Early Victory

Referring to Lewin's model the steps mentioned above will initiate the process and unfreeze or stir the preset stage. Having achieved that, the change processes can be initiated. This stage provides multiple options –a number of ideas can be developed to deal with the new challenges but the executives ought to be selective keeping in view the importance and the time to be taken by various ideas. As a manager, leading change, seems to be working in an emergency situation with limited resources, he needs to establish priorities which optimize importance and urgency. As the process of change may take years before providing any significant return, people may loose patience and therefore, the leader needs to make an effort to do things which produce results. This implies that opportunities for early victories have to be identified while pursuing the change efforts. There is a lot of untapped potential among people at various levels which needs to be harnessed. It has been observed that an average Japanese worker gives more than 100 ideas every year. In case of Toyota, 80% of the ideas given by workers have been implemented and have been found to be useful. However, in order to have early victories one does not have come up with quick- fix solutions. It has to be borne in mind that early victories help in sustaining energy and momentum in the change process.

Becoming Your Own Competitor

Leadership results from competing against one's own achievement than against competitors only. This spirit promotes learning, experimenting and evolving. By doing so one can avoid corporate arrogance which may cause complacency.

Leading Change Involves Coalition

Coalitions are highly beneficial in bringing about change. Firstly, they help in having a broad base of ideas and a broader perspective. Secondly, by involving a large number of people the likelihood of support for change increases.

6.12 HARNESSING THE ENERGY OF CHANGE CHAMPIONS

Peter Drucker once said, "whenever anything is being accomplished, it is being done, I have learned, by a monomaniac with a mission." That sure squares with my own consulting experience. When I look back at the hundreds of team or organization changes I've been involved in during the last three decades, most successful – and certainly all major ones – were driven by "monomaniacs with a mission." Sometimes the champion had a powerful organizational sponsor running interference for the passionate person who was pushing hard for a change or improvement. Other times, he or she was on their own at first and built a strong change coalition or team of change champions.

The change could have been in an accounting or human resource system. It could be a clinical service, record keeping procedure, training program, or work process. Sometimes it was the organization structure, key process, or decisions on the core services the organization was providing. Research into the nature of innovation and organization change, clearly shows the key role change champions play in team and organization change. They are needed to overcome the bureaucratic response of "we've always done it this way" (which almost guarantees it's no longer relevant today). Champions push against the inertia, passive resistance, or outright opposition that resists most changes – even if they're for the better.

A good champion is passionate about their cause or change. He or she is a staunch, zealous, fanatic. A great champion is emotional, irrational, irreverent, impatient, and unreasonable. He or she wants the change – no matter how big – to happen this week, this month, or certainly by the end of this quarter. To an impassioned change champion, the sky is often falling and the situation is desperately urgent.

The improvement opportunity the change champion is advocating, is often presented as the one and only key to the organization's future. Highly effective change champions don't just rock the boat, they sometimes capsize it. They want to disrupt and demolish the status quo. Many of the best champions don't just want change; they want a revolution.

With their focus on ordered, controlled, and planned "change management", many managers suppress or drive out champions. In an oppressive environment, numerous would-be champions become good little bureaucrats conforming to the official plans and obediently following "the system." Others subversively continue

to make changes out of sight of management or the bureaucracy. Some leave to start their own businesses, or join a less stifling, more entrepreneurial organization.

Change champions are vital learning leaders for an organization. But many are not in formal leadership roles. We need to harness their energy, ideas, and creativity today more than ever. But we have to learn how to coordinate their unbounded and disruptive zeal. Their energy needs to be gently directed toward our larger goals and improvement process. Change champions have great strengths, but many also have glaring weaknesses. For example, they may refuse to see or try to understand the need for a delicate balance between change and stability.

We can't manage change (a true oxymoron) or champions. Sometimes the best we can do is point them in the right direction and get out of the way. Then sponsor and protect them from the bureaucracy when they need it (servant-leadership). Once change champions have found the new trail, we can pave it over and make it official. Then we can set the relevant teams or parts of our organization on this new road to higher performance. Meanwhile – if we have a healthy culture of innovation and organizational learning – more change champions are getting ready to move us off this track. Today's solutions are already creating tomorrow's problems.

Let's Get Practical

Following, are a few approaches that have proven successful in nurturing, harnessing, and leading change champions to move the organization forward:

- You can't encourage and support what you don't know is happening. The most interesting and useful local change and improvement initiatives rarely make it into reports or formal channels. That may be because they're "illegally" breaking corporate rules, deviating from the standard process, or failing to follow the official plan. It may be because local champions or teams (skunk works) don't realize the significance of their innovation to the rest of the organization or a potential new market.
- One non-negotiable, is that all improvement activities focus outward. All changes either serve an external client or partner, or serve somebody who is. Changes that make internal life easier but reduce care, service, quality, or innovation aren't improvements. Current and potential clients and/or the partners serving them should be at the center of, or key members on, the local learning teams. They need to be "mucking around" to find new and improved ways of producing, delivering, or supporting your products and services.
- Demonstration or pilot projects are powerful learning, change, and improvement tools. These can be great opportunities to set up a "greenfield site." This is where you can test new structures, tools, and techniques.
- A highly effective leader can have twenty years of rich learning and experience. But many mediocre performers have one year of experience multiplied twenty times. The same learning disability afflicts organizations that haven't developed

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the systems and practices for transferring and communicating the rich learning that comes from local initiatives.

- Institute an internal "best practices and good tries" system, clearing house, or network. You could have intranet sites, frequent meetings, voice or e-mail learning exchange systems, team visits, project fairs, or other share-and-compare forums. Measurement systems and feedback loops should make the results every team is getting, highly visible and widely available to everyone. Your education, training, and communication activities should continuously keep people throughout your organization in touch with what's working and what isn't.
- Celebrate, publicize, recognize, honor, thank, applaud, and otherwise encourage champions and local teams who take initiative to change and improve their part of the world.
- Look for the existing leaders and champions who are making improvements and changes. Shape your improvement plan and process by building on their energy and experience. Since change champions won't be covering all areas as completely as possible, they are also the logical starting point for making the changes and improvements that will better round out and balance your long-term effort.
- Develop change and improvement momentum by building around the champions who are most likely to make the effort succeed. They will help to bring the others on side. They are also the ones you and everyone else can learn the most from. But don't try to impose their successful approaches on others. Ownership and personalization are the keys to local adaptation of changes and improvements. Sell, persuade, educate, and communicate.
- Don't automatically label resistance to change as negative and something to be overcome or beaten back. The real enemy of organizational change, is apathy. "Just tell me what you want done, boss, so I can get out of this place and on with my real life", is the attitude that kills change. Resistors often have strong passion and high energy. They resist because they care. Understand the roots of their resistance and re-channel it. Get them inside the circle of wagons, shooting out.
- Discuss with your management team how your successful change champions (some of whom will be present), have emerged and been supported in the past. What can you learn from those experiences? How does your bureaucracy suppress or drive out emerging champions? How can you ensure that change champions get the mentoring, sponsorship, and management support they need to buck the system? What do your champions think?
- The single biggest key to leading change and nurturing champions from the middle or lower levels of an organization, is to not disempower yourself. Don't point your finger upward and say most of these points apply to "them."

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If you're not a senior manager, your organization change and improvement choices are:

- Do nothing but complain and hope "they" smarten up
- Quit, or
- Make as many changes as you can in your own area. Help others to change and try to influence the system. In other words, act like a leader.

6.13 LEADERSHIP FOSTERING PASSION FOR CHANGE

"Without passion man is a mere latent force and possibility, like the flint which awaits the shock of the iron before it can fire forth its spark." — Henry Amiel

Strong leaders are very good at aligning individual interests, strengths, and goals with the work that needs to be done. To paraphrase Joseph Campbell's famous dictum, they help people follow their bliss. Peter Drucker once observed, "Whenever anything is being accomplished, it is being done, I have learned, by a monomaniac with a mission."

Strong leaders harness the passion of the monomaniacs on their team to bring about change. Even if this passion is against the leader's change, it is still valuable since a leader knows that resistance to change is far better than apathy. The stronger the resistance, the stronger the energy that's available. So leaders dig deeper to understand the source of the resistance and either rethink the change based on the wisdom they uncover, or they harness and realign the energy of that resistance.

When a team member approaches the leader with an improvement suggestion (and this happens to leaders more frequently than to conventional managers), the leader will first probe to see how deep his or her passion might be for the change. If it's reasonably strong and the idea merits testing, the leader will often give the team member responsibility for trying out or implementing the change. This creates higher ownership and nurtures a team of people who get directly and actively involved in making improvements. This high-involvement leadership sharply contrasts with the traditional approach of frontline people making suggestions for management or other departments to implement — and then grumbling in the hallways that nobody ever acts on their suggestions.

Strong leaders engage people's hearts. They build ever-deeper passion and commitment. The key leadership word is "care." When we care about our work, we will often be harder on ourselves than anyone else would dare to be. When we really care about the customers we serve, we'll go out of our way to ensure that each "moment of truth" (contact with customers) is as positive as we can make it. When we care about making our organization successful, we'll go above and beyond our job to do whatever it takes to be part of a winning team. When we care about our products or services, we'll do whatever it takes to continue feeling proud of what we do.

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Leaders care deeply about the people in their organization. Team members feel their care and reciprocate it.

"Of all the decisions a manager makes, none is as important as the decisions about people because they determine the performance capacity of the organization... the goal is to make productive the specific strengths and knowledge of each individual." — Peter Drucker

An old bit of Texas wisdom teaches us that "you can put your boots in the oven, but that don't make them biscuits." Leaders know that nothing kills passion and commitment in their organization more than bad hiring and promotion decisions. That's why leaders spend a huge amount of time assessing new people they are hiring and everyone they're considering promoting.

The average manager will interview someone once or twice before making a hiring decision. Strong leaders will put candidates through four to six personal, peer, and team interviews. A study by the Center for Creative Leadership found that when one individual made hiring decisions for management positions, the newly hired manager was judged to be successful just 35 percent of the time. When a hiring team of four or five made the decision, success rose to 55 percent. But when the small group included both customers and subordinates, success rates soared to 70 percent.

6.14 MORE CHANGE DEMAND MORE LEADERSHIP

"Leadership is about coping with change. Part of the reason it has become so important in recent years is that the world has become more competitive and more volatile...doing what was done yesterday, or doing it 5% better, is no longer a formula for success. Major changes are more and more necessary to survive and compete effectively in this new environment. More change always demands more leadership."
— John Kotter, "What Leaders Really Do," Harvard Business Review

Change is a fact of life. And as the pace of change accelerates, organizations are being pulled in many directions by factors such as new technologies, customer demands, e-commerce, workforce demographics, business model challenges, fierce competition, shareholder expectations shrinking cycle times, and shifting work ethics. Now, more than ever, organizations need the bonding glue of a strong culture to hold everything and everyone together.

At the core of a high performance culture is a strong leader who knows where he or she wants to lead their organization, but is highly flexible and opportunistic in pulling teams together to try new approaches, to experiment, and to learn (as well as occasionally fail) their way to success. As Winston Churchill put it, "True genius resides in the capacity for evaluation of uncertain, hazardous, and conflicting information."

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And no matter what the information is, leaders always inspire a response, whether positive or negative. They move forward with purposeful action that, like a powerful magnet, both attracts and repels. Those people who are excited by the vision, join the team and add to a powerful coalition. Those who are lukewarm or turned off by the vision, values, and purpose quickly turn away. Few are left indifferent and apathetic.

Within the workplace, a leader typically has a clear mental picture of what success looks like for a particular project or, more generally, for a successful team or the organization as a whole. He or she is able to "emotionalize" that picture and bring it alive for people. Leaders impart a sense of trust and credibility by living true to a set of core values or guiding principles – even if they haven't articulated and labeled them. People respond to this leadership because they can clearly see the principles from which it flows. Dorothy Law Nolte's poem, "Children Learn What They Live" was the inspiration for my own poem about team member learning.

Case Study: General Electric's Two-Decade Transformation Under the Leadership of Jack Welch

When Jack Welch became CEO of GE in 1981, he set out to reenergize one of America's largest companies. Through a revision of GE's mission and values Jack Welch grew GE from a $24+ billion company to into a $74+ billion company, ready to face competitors and future challenges. Welch realigned goals and motivation, forcing managers to stretch to previously unknown limits. Any company not number one or two in their industry was divested or closed and though sometimes perceived to be a destroyer, he restructured GE into one of the world's most staid corporations.

Jack Welch's management and motivation approach included three main areas:

- Goal setting and preparing the company on a corporate level for its competitive challenges;
- Empowering employees at all levels of the organization; and
- Communicating his new goals and visions through the entire organization, using such tools as extensive training programs, newly formed teams and 3600 review processes. Different aspects of Jack Welch's management tactics, in terms of motivating employees to bring about change.

When Welch took over GE, he had a vision of creating an organization where people at all levels could be held responsible for their own work, and in the end make decisions for the betterment of their job. The goal was not to control workers, but instead to liberate them. Welch characterized this as creating a boundaryless organization in which empowered employees were self directed and motivated to effectively reach their goals. When Welch became the CEO of GE he found that the company was still organized the way it had been when

Check Your Progress

Fill in the Blanks

5. .... involves stabilising and reinforcing the new ways or new things to do.
6. .... are highly beneficial in bringing about change.
7. The role of a leader is to facilitate change that helps in improving ....
8. .... to today's change comes from failing to make yesterday's preparations and improvements.

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GE was founded near the turn of the century. Specifically, it was represented by an overwhelming nine layers of management between the shop floor and the CEO. This bureaucracy lead to an unresponsive, inward focused company whose employees found great difficulty in communicating with one another. In fact, if GE's massive cost structure was not dramatically restructured, analysts projected that GE would become unprofitable by the end of 1982. Welch addressed this issue by eliminating whole layers of management (see appendix for 1981, 1992 &1993 organizational charts), consolidating overlapping jobs and business units, and forcing employees at every level to take more responsibility for their own work. If something was not absolutely necessary they eliminated it (very much like Xerox did in "Dining at the Quality Restaurant"). They stopped gathering unnecessary financial data and eliminated unnecessary reports. In the past, it had not been unusual for business managers to request daily reports that contained so much detail that the reports often produced a 12-foot high stack of paper. The sheer mass of detailed information made a mastery of the details impossible thereby rendering the information relatively useless.

In the plant equipment operators became responsible for the quality of their own work, reducing the need for inspectors. In effect, employees were given the ability to eliminate those aspects of their job that were unproductive and thus unnecessary. An important aspect of this has been the Work-Out, which has opened the communication channels necessary to help bring about innovative change (once again very much comparable to the training camps introduced by Xerox in its attempts to reinvent itself).

The Work-Out has been an empowerment concept greatly favored by Welch. Thousands of GE employees get an opportunity to get together and share their ideas, thoughts and know-how, while building and fostering a more creative and team-oriented atmosphere. The Work-Out encourages communication and accountability with the ultimate goal being to drive above average team performance. By providing each team member with the opportunity to contribute his ideas to the decision-making process, Jack Welch's hoped to stimulate individuals to constructively challenge their bosses and promote a more motivated workplace. All Work-Outs included follow-up meetings where previous commitments were discussed and accountability was enforced. Empowerment has been a two-way street. Employees have received the satisfaction of being able to air their concerns, while the company has greatly benefited from insights shared in the Work-Out. Under Jack Welch, GE began to realize that human beings are not machines and that each person has the potential to enhance productivity. Knowing how to use this resource can not only give the company a competitive edge, it can make each employee feel more important in the production process and thus more motivated. Although it is difficult to measure the results of empowerment, GE believes that the success of the company in the future will prove that it was the right decision to make. The key question therefore is to find out how leaders

like Welch decide that empowerment is the right strategy and how they in general decide if it is the right strategy to implement at their companies. "Boundaryless behavior" and the elimination of unnecessary communication filters are the key phrases to describe Jack Welch's attitude towards communication. He encourages input from every employee, from the factory floor to the executive suite. To facilitate goal setting and empowerment within GE, Welch needed to establish clear lines of communication in the organization. He realized that employees come to GE with many different experiences and backgrounds. He did not want to take away from the benefit of those various backgrounds, as much as reshape them with GE philosophies. This is not to say that he wanted a workforce of robots. Just the opposite actually, he wanted free thinkers. One of his objectives was to motivate people to think outside the box and challenge the status quo. Open communication channels between Welch and his employees have been an important tool in this regard. These channels work in both directions, giving employees the ability to air their concerns and work towards a consensus for action. They also help motivate employees, because once again employees feel that they are directly contributing to the success of the company.

Cultural Change Processes

GE's Work-Out process was created in 1988 as part of the ongoing drive for better productivity and efficiency. Initially, Work-Out was intended to identify and eliminate unneeded processes and tasks that were left over from previous years, when management had more layers. After restructuring, many groups did more work with fewer people, rather than making comprehensive operational changes. The aptly named Work-Out process involves identifying an area in need of improvement and bringing people together from all sides of the process (design, marketing, production, sales, etc.) to identify a better method. The Work-Out team meets outside of its normal work environment to discuss the issues and develop recommendations. Team recommendations are presented to the responsible managers, who must accept or reject proposals on the spot. Ideas that require further study are reviewed for a period of time agreed on by the team (usually less than a month) before a final decision is made. The process encourages responsive leadership and greater employee participation, which increases the rate of change throughout the organization. When Work-Out began, groups initially attacked the obvious things that didn't make sense in the new GE, known as "low-hanging fruit". As Work-Out evolved, customers and supplier-partners were introduced to the process. The Work-Out process is now part of everyday life at GE. In General Electric Jack Welch was the OD practitioner. He brought so many changes like:

- **Mergers & acquisitions:** Jack Welch made more than 200 mergers & acquisitions. His first acquisition was with Hungary Lighting in 1989. The

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reason behind the success of mergers & acquisitions was its integration model. There was some policy which was followed by GE before making any acquisition. These acquisitions accelerate the future of GE.

- **Delayering:** When Welch assumed the position of CEO, he saw the extent of GE's vast bureaucracy. There were more than 500 senior managers, more than 100 vice presidents, and some 25,000 managers. There were strategic planners who hired vice presidents, and vice presidents who hired strategic planners. Removing entire layers of management was a defining aspect of Welch's hardware revolution. Not only did he eliminate layers of management, he also dis-mantled the walls that had separated key functions (for example, marketing and manufacturing) within the company.
- **E-initiative:** Welch used to refer to GE's Internet initiative. As part of GE's e-Initiative, Welch recommended that every process be digitized. The GE CEO saw this as yet another important step in making the company faster and more agile. In 2000, digitization helped the company sell more than $8 billion of products and services via the Internet. Welch calculated that GE's digitization of its processes would save the company in excess of $1.5 billion in operating margin in 2001. GE calculated that e-business would save over $1 billion in operating margin in 2001 and have $1.5 billion in cost savings. Welch also predicted that in 2001 GE would buy about $12 billion in materials over the Internet and rack up online sales of about $20 billion. He now called the Internet "the thing of the future" and saw it as a productivity tool to "make the old young and the slow fast." E-business had Welch talking speed again, and he threw himself into this, his final major company-wide initiative, with the same fervor as his other three crusades.
- **Globalization:** Welch understood that unless the company moved onto the world stage, it would not become a global competitor. Starting in the mid- to late 1980s, GE launched a three phase revolution that ensured the company's place in world markets. Welch's first key growth initiative, globalization played an important role in helping GE grow at double digit rates throughout his tenure. Today globalization is an indelible part of the GE fabric. So much so that the company says it is "less an 'initiative' and more a reflex." That brand of thinking represents a vast departure from where GE was only two decades ago. Before CEO Welch took the reins, GE derived only 20 percent of its revenues from non-U.S. markets. In 2001 more than 40 percent of GE's sales was from outside the United States.
- **GE Six Sigma Quality Coach:** An Internet-based mentoring program (or Web-based performance support system) that helps train GE personnel on the quality initiative. This is an important tool in helping GE achieve Six Sigma quality. It was developed after GE performed 55,000 Six Sigma projects

involving 4,000 quality leaders, and consists of more than 50 tools used in implementing the steps of Six Sigma.

- **The Product Services Initiative:** Welch knew that GE's manufacturing business would take the company only so far, as the market for huge-ticket items like jet engines was limited. In 1995,Welch made product services a top priority, helping to double GE's product service business to $17 billion by 2000.
- **Work-Out:** Welch's second major company-wide initiative (after globalization) turned hierarchy on its head. Of the five company-wide initiatives, Work-Out was Welch's only cultural initiative and the one most responsible for changing attitudes and behaviors within GE. Work-Out ensured that managers listened to workers, giving employees a voice in decision-making. Welch credited Work-Out with establishing the boundaryless culture that helped create GE's "learning engine." Work-Out was a seminal program that helped to bring an end to the type of scientific management methods that had ruled GE and other large companies for decades. Welch said that "Work-Out was nothing more complicated than bringing people of all ranks and functions—managers, secretaries, engineers, line workers, and sometimes customers and suppliers—together in a room to focus on a problem … and then act rapidly and decisively on the best ideas developed, regardless of their source."

Barriers during the changes

Anything that hampered performance or open communication was to be torn down. Welch's initiatives were designed to erase the barriers that proliferate in large organizations: horizontal barriers, vertical barriers, and external barriers. Welch urged employees to "blow up" bureaucracy and knock down every boundary. Much of what he did in the 1980s, from delayering to Work-Out, was explicitly designed to remove debilitating barriers. Welch was fiercely committed to removing any speed bump that slowed the company down. His strategy of boundarylessness was specifically designed to remove the boundaries that separated GE workers from new ideas, customers, and each other.

There are two type of barriers – horizontal barriers & vertical barriers.

- **Horizontal barriers:** These are the debilitating boundaries that isolate separate groups within the company, such as sales and manufacturing. Horizontal barriers also refers to geographic walls that exist, such as between Seoul and Sidney. With programs like Work-Out and Globalization, Welch tore down these unnecessary barriers.
- **Vertical barriers:** Barriers had no place in Welch's boundaryless organization. Vertical barriers are those layers that added bureaucracy and put more distance between executives and employees. When Welch became CEO, there were

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nearly a dozen layers between CEO and the factory floor. He delayered, chopping the wedding cake hierarchy down to only four or five layers.

Re-shaping GE for the Future

While others are worrying about the next quarter, Jeff Immelt is planning years of explosive growth. He's trying to recast GE for decades to come, spending big bucks to create the new infrastructure of innovation, beefing up GE's global research facilities, overhauling the GE research center in Niskayuna, NY, investing in new, cutting-edge R&D centers in Bangalore, India, Shanghai, China and Munich, Germany.

The simple fact is that most of GE's growth will come from outside the US. Jeff Immelt predicts that developing countries will account for 60% of the company's growth in the next 10 years, vs. about 20% for the past decade.

To Jeff Immelt, the best managers are great marketers and not just great operators. Marketing is not just a matter of producing better commercials or catchy slogans – it means getting outside the company to understand markets and customers. Managers must look to lead industries rather than merely follow demand. And they must be leaders who are experts in their business and intensely passionate about what they're doing.

Conclusion

Jack Welch's attitude towards management boils down to a few very simple ideas: breaking down hierarchies, ensuring free information flows throughout the organization, and encouraging people to talk, listen and be open to new ideas. When he first became a GE vice president at the age of 36, he "stalked out on the plant floor, or picked up the telephone to deal directly with anyone at any level when a problem came up" and that is the organization Jack Welch has attempted to build in terms of communication. Welch succeeded in transforming a complacent behemoth into an energized company ready to face world competition. By flattening the organization and by removing unnecessary layers of bureaucracy, he liberated employees and empowered them to make decisions and effect their jobs, as well as the company as a whole. At the same time, he relied on stretch goals and the slope of satisfaction (as previously discussed) to further push the company to new levels of achievement. An additional sense of empowerment was relayed through various communication, training and motivation mediums, such as the "Work-Out", "the Pit", "the Corporate Executive Council" and other special project teams. Foremost he underlined his words with accompanying actions and an exemplary attitude, avoiding the well known saying that words by themselves are empty. Through the use of 360- degree review processes, appropriate bonus schemes and structural organizational changes, Welch created and opened communication channels at GE, allowing for unprecedented

networking, teamwork, and openness to take place at GE. All of these factors combined to form a motivating force for the employees of GE. This motivation in turn lead to a decade of outstanding performance by Jack Welch and General Electric Corporation.

Source: *Scribd.com*

6.15 SUMMARY

- The change management strategy also contributes to formulation of the rest of the change management plans. For instance, the groups identified in the strategy should each be addressed specifically in the communication plan.
- According to the Hughes Text, the rational approach increases follower dissatisfaction by pointing out problems with the status quo, systematically identifying areas of needed change. In contrast, emotional approach focuses on heightening the emotions of followers and empowers them to act on their vision (Hughes 2006, p.117).
- Re-educative strategy is defined as a strategy that believes that norms in an organization can be purposely shifted to attain higher productivity, through collective people efforts.
- The Power - Coercive strategy, runs the risk that once the power is removed, people may revert to their original behavior.
- The Environmental-Adaptive Strategy, suggested by Fred Nickols, is built on the premise that while people innately resist change, they also eventually adapt themselves to it, when they are left with no choice.
- Change descends on everyone equally; it is just that some realize it faster. Some changes are sudden but many others are gradual. While sudden changes get attention because they are dramatic, it is the gradual changes that are ignored till it is too late.
- Piecemeal growth implies a change process that is emergent, rather than planned up-front. While the vision for where we're going may be known a priori, the path itself emerges as we traverse it. This allows us to learn as we go.
- In participative strategy all the individuals within the organisation are fully involved in the change process.
- It is often the case that companies are faced with a dilemma about whether the change initiatives must be driven from the top or they should be organic from the bottom-up. This is especially the case with organizations that are growing in size where the increased employee base or the skyrocketing sales and revenues mean that the top management's scope of control is more and hence driving change from the top alone might not just work.

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level management, the change process is driven more by groups or individuals within the organisation.

5. Refreezing.
6. Coalitions.
7. organisational performance.
8. Resistance.

6.18 QUESTIONS AND EXERCISES

Short Answer Questions

1. Define rational strategy.
2. What do you mean by emotional strategy?
3. What are the key characteristics of re-educative strategies?
4. Define piece-meal strategy of change management.
5. What are the change characteristics?
6. Change can't be managed. Define.
7. What is the holistic chain strategy?

Long Answer Questions

1. What are the major change management strategies?
2. Make a discussion on re-educative vs. coercive strategies.
3. Write a note on top-down vs. bottom-up strategies.
4. What are the key leader's principles in a changing world?
5. What are the key elements of change management strategies?
6. How can one harness the energy of change champions?
7. Discuss the role of leadership in fostering passion for change.
8. More change demands more leadership. Discuss.

- The role of a leader is to facilitate change that helps in improving organisational performance. But the challenge before a leader is how to be effective in the face of dissatisfaction, discomfort, dislocation and increased stress among people.
- The change could have been in an accounting or human resource system. It could be a clinical service, record keeping procedure, training program, or work process. Sometimes it was to the organization structure, key process, or decisions on the core services the organization was providing. Research into the nature of innovation and organization change, clearly shows the key role change champions play in team and organization change.
- Strong leaders harness the passion of the monomaniacs on their team to bring about change. Even if this passion is against the leader's change, it is still valuable since a leader knows that resistance to change is far better than apathy.

6.16 KEY TERMS

- **Strategy:** A strategy is a long-term plan of action designed to achieve a particular goal.
- **Sponsor coalition:** The sponsor coalition describes the leaders and managers that need to be on-board for the change to be successful.
- **Normative-Reeducative Strategy:** Normative - Re-educative Strategy is defined as a strategy that believes that norms in an organization can be purposely shifted to attain higher productivity, through collective efforts.
- **Piecemeal growth:** Piecemeal growth implies a change process that is emergent, rather than planned up-front. While the vision for where we're going may be known a priori, the path itself emerges as we traverse it.

6.17 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The organizational attributes are related to the history and culture in the organization and describe the backdrop against which this particular change is being introduced.
2. The sponsor coalition describes the leaders and managers that need to be on-board for the change to be successful.
3. Piecemeal growth implies a change process that is emergent, rather than planned up-front.
4. In participative strategy all the individuals within the organisation are fully involved in the change process. Though the major decisions are taken by the top

MODEL QUESTION PAPER

DISTANCE EDUCATION

MBA Degree Examination

Fourth Semester

Knowledge and Change Management

Time: Three hours — *Maximum: 100 Marks*

PART A **(5 × 8 = 40 Marks)**

Answer any FIVE Questions

1. Define knowledge management. What do you mean by Communities of Practice (CoP)?
2. Discuss Data>Information>Knowledge>Wisdom Continuum.
3. What are the key steps included in knowledge management process?
4. What do you mean by knowledge management infrastructure?
5. Discuss the meaning and nature of CM. What are the different types of change?
6. Discuss the Johan P. Kotter's eight steps to successful shange.
7. What are the key steps of change management process? Discuss.
8. What are the key characteristics of re-educative strategies?

PART B **(4 × 15 = 60 Marks)**

Answer any FOUR Questions

9. Define knowledge engineering. What are the key principles and methodologies of KM?
10. Discuss KM as management of information and knowledge workers.
11. Define knowledge. Discuss the framework of developing KM strategies.
12. What do you mean by knowledge life cycle and business process environment?
13. Discuss CM as 'Unconscious Incompetence' to 'Conscious Competence'
14. Discuss the concept of organizational change to deal with whirlwinds of change.
15. What are the major change management strategies?

MBA (TECHNOLOGY MANAGEMENT)
PAPER - 4.2

KNOWLEDGE AND CHANGE MANAGEMENT



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